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THE SEMANTICS OF CLASSIFICATORY VERBS IN ENGA (AND OTHER PAPUA NEW GUINEA LANGUAGES)

by

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PREFACE

This book is based on fieldwork carried out among the Enga from August 1967 to August 1968, and from May 1969 to September 1969, a total of seventeen months, as a Research Scholar of The Australian National University. The first few months of this period were spent at or near Wabag, the remainder at Kopetesa, a small hamlet approximately thirty miles west of Wabag in the western dialect area of Enga. The final work for this book was carried out from December 1973 to February 1974 in the Enga District. A trip to the Summer Institute of Linguistics base at Ukarumpa in September 1973 yielded material incorporated in Chapter Five (Comparative Perspective) and in Appendix E.

The decision to undertake a study of Enga was based on two considerations: firstly, that in connection with my husband's fieldwork I was already living among the Enga and had attained a fair degree of speaking proficiency in the language, and secondly, that a considerable amount of linguistic and ethnographic work had already been done on the Enga.

This is a semantic study. It arose out of my previous interest in ethnoscience and because of this began with the determination of the features of the animate sub-set of Enga nouns. Since studies "of any sort in ethnozoology are rare" (Sturtevant 1964:120), I felt that this would provide a contribution to a neglected domain. The elicitation of semantic features of the animate nouns provided the first evidence of the Enga existential verbs: any noun elicited would be followed by a verb which indicated its habitual state of existence. Interest in the existential verbs and the elicitation of their features led to the discovery that they were classificatory verbs and that they co-occurred only with [+concrete] nouns. This led to further work on the verbal system with the result that [-concrete] nouns were found to co-occur with another set of classificatory verbs.

Thus, the topic became focused as a semantic study of a portion of Enga, the animate nouns and the classificatory verbs. One of the main features is that the book attempts not only to explain the usual occurrences by means of semantic redundancy rules, but also to account for the exceptions to these, i.e., the assumption that rules are broken in accordance with (culturally determined) rules for breaking rules (cf. Landar 1965 and Dixon 1968:120). The associated problems were: Can semantic features be given? Can semantic redundancy rules be formulated? What are the exceptions to these rules, and can they also be accounted for? Are the rules part of a semantic hierarchy or does cross-classification of the items exist? Can comparative data be given for other Papua New Guinea languages with similar phenomena?

The introductory chapter states the problem and gives a description of the data base; Chapter One gives a sketch of the Enga and their culture and of previous linguistic work on Enga. Chapter Two describes the existential verbs, their syntax and semantics. Chapter Three is a brief excursion into the animate nouns, one sub-set of the [+concrete] nouns which co-occur with the existential verbs. Chapter Four describes the classificatory verbs which co-occur with the [-concrete] nouns, some problems connected with them, and their semantics. Chapter Five deals with comparative materials from other New Guinea languages on the two kinds of classificatory verbs. The monograph concludes with a brief discussion of the results of the study in Chapter Six.

The appendices contain supplementary materials on the semantic classes of Enga verbs (A), methods of data compilation (B), data on the Enga existential verbs (C), data on the classificatory verbs for the [-concrete] nouns of Enga (D), and some comparative data from possibly related languages (E).

PRESENTATION AND ABBREVIATIONS

All examples are given in the usual Enga orthography; the tonal structure of items without tone marks is, at present, not known. In the interlinear translation, morpheme boundaries are indicated by a hyphen; the period (.) indicates a unitary lexical item in Enga; square brackets enclose features.

Enga examples in running text are printed bold, their English glosses appear in italics. Text within double quotation marks is quoted from the literature.

The examples are numbered within each chapter, and the notes may be found at the end of each chapter.

AG	Agentive
AS	Associative
BEN	Benefactive
CAUS	Causative
COMP	Completive
CONF	Conformative
CONJ	Conjunctive
DEC	Declarative
DET	Determiner
DU	Dual
EXCL	Exclusive
FP	Far Past
FUT	Future
GEN	Genitive
HAB	Habitual
HIST	Historical events
IMM	Immediate
IMP	Imperative

INCL	Inclusive
INF	Infinitive
INST	Instrumental
IP	Immediate Past
LAKA	Desiderative marker
LOC	Locative
N	Noun
NP	Noun Phrase
NP	Near Past
-0	0-complementizer
PAST	Past
PL	Plural
POSS	Possessive
PRES	Present
PUR	Purpose
QU	Question
STA	Stative
SENSE	Sensed
SG	Singular
TEMP	Temporal
UP	Up
V	Verb
VP	Verb Phrase
1	1st person
2	2nd person
3	3rd person
+	Loan items
?	Questionable
*	Ungrammatical
/	Or

INDEX OF BOUND MORPHEMES

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INTRODUCTION

0.1 *INTRODUCTION*

Much is now known about the general structural character of Papua New Guinea languages,[1] although relatively few of these have been studied and described in any detail.[2] Whatever studies have been made have focused on the phonology, morphology/syntax of particular languages. And of these, the bulk has concentrated on the morphological structure and/or syntactic function of verbs alone, since these are usually very complex linguistic entities which may be said to 'dominate' the languages in which they occur (Capell 1969). This work is a further contribution to verb studies in Papua New Guinea languages. It builds on previous linguistic work and knowledge and attempts to extend this to a new level by taking a detailed look at the semantics of a set of verbs in Enga, a non-Austronesian language of the central highlands of Papua New Guinea.[3]

In particular, this is a descriptive and exploratory semantic study of a group of verbs in Enga which co-occur only with certain classes of nouns, and so are described as 'classificatory verbs'. Hitherto these verbs have not been discussed as such in the literature on the structure of Papua New Guinea verbs, and no semantic analysis or description of them has been attempted.[4] They have, however, been mentioned in connection with syntactic descriptions of Papua New Guinea languages in a more general way, so that this provides some base for discussing the extent and distribution of this phenomenon throughout Papua New Guinea.

The term 'classificatory verb' is not new. It has been used for some time in studies of American Indian languages where phenomena similar to those of Enga have been described in these terms. That the phenomena are important and worthy of detailed investigation has been pointed out by Haas, Berlin, and others. Thus, Haas has

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said that

> classificatory verbs clearly deserve far more attention than they have received in the past as indicators of covert taxonomic systems of considerable complexity (1967:361).

Brent Berlin has stated that classificatory verbs, noun class markers (as in the Bantu languages), and numeral classifiers (as in Chinese, Mayan and Tarascan) are "three syntactic devices utilized by many languages of the world linguistically marking highly salient features of the physical world...ultimately it will be necessary to consider each of these three syntactic devices as focusing on similar semantic features..." (Friedrich 1970:380).

Classificatory verbs may be either overt, as in the Athapascan languages (Hoijer 1945; Haas 1948, 1967; Landar 1964, 1965, *et al.*), or covert, as in Tarascan (Friedrich 1970) and Enga. As a point of departure for this description, we will take Hoijer's classic article on the verb stems of Apache, which outlines three kinds of verbs:

i non-classificatory verbs,
ii classificatory verbs, and
iii 'pseudo' classificatory verbs.[5]

Hoijer (1945) has defined these as follows:

> i Non-classificatory verbs:
> ...verb stems denoting a specific type of action or behavior. Forms like...'he speaks so',...'he is walking, moving',... 'you buy it' employ verb stems...of this kind (22).
>
> ii Classificatory verbs:
> ...verb stems which refer to a class of objects participating in an event, either as actor or goal...(22). ...there is no simple verb 'to give' but a number of parallel verb themes consisting of a certain sequence of prefixes plus a classificatory verb stem. The sequence of prefixes is the same for each theme but the stem varies with the class of object referred to (13).
>
> Some examples of these include:
> 'she gave [a twenty-five cent piece] to him', 'he gave [a bundle of arrows] to him', 'you take a round object out of (an enclosed space)', 'you take a fabric-like object out of (an enclosed space)' (14).
>
> These verb stems have a
> ...neuter intransitive denoting an object of a particular type in position or at rest,...'a mountain lies [over yonder]'...(22).
>
> iii 'Pseudo' classificatory verbs:
> ...stems which stand between the two categories just outlined. Some of these are to be distinguised from the classificatory stems only in their neuter forms; active verbs denoting the movement or handling of their object class are the same as those of some other classificatory type. An example of this phenomenon is found in Navaho...'it is bent bow-like', for when we speak of handling a 'bow-like object' we must use active verbs of the 'long object' class (22f.).

Note especially that the form that distinguishes the classificatory from the 'pseudo' classificatory verbs is the 'neuter' form of the type 'a mountain lies'. Enga does not have 'pseudo' classificatory verbs, but the Enga form corresponding to the 'neuter' Navaho form, the existential verb, also comprises a special sub-set of the classificatory verbs in Enga. Of the three types given by Hoijer (non-classificatory, classificatory, and 'pseudo' classificatory verbs), Enga has the first two, but not the last.

Both the Athapascan languages and Enga have non-classificatory verbs; in Enga these are exemplified here by yawa- *steam (in an earth oven)* in:

1. Akáli dúpa-me mená dúpa yawe-ly-amí-no.[6]
   man the-AG *pig the steam*-PRES-3PL-DEC
   The men are steaming the pigs (in an earth oven).

These are briefly presented in 1.2.1 (following) and appear grouped into semantic classes in Appendix A; they are hereafter ignored, since the study deals only with the classificatory verbs of Enga.

The classificatory verbs in Enga are of two types, and are distinguished by the type of noun which co-occurs with them. The first type co-occurs with concrete nouns in Enga, and corresponds to Hoijer's 'neuter' stem which denotes "...an object of a particular type in a position or at rest" (1945:22). In Enga these verbs classify the concrete nouns into seven sub-classes, of which three are exemplified in (2-4):

2. Énda dúpa pete-ngé.
   woman the BE-HAB
   Women exist.

3. Ándá dúpa kate-ngé.
   house the BE-HAB
   Houses exist.

4. Jípi dúpa sí-ngi.
   jeep the BE-HAB
   Jeeps/cars exist.

In these sentences, the verbs pita-, kata-, and sa- indicate that objects of a particular type (e.g., *woman, house* and *jeep*) are in a position at rest. These verbs (and the others which constitute the set) will be referred to as existential verbs (hereafter EV) and will form one of the main topics of description and analysis in Chapter 2.0.

The second type of classificatory verbs in Enga co-occur with the non-concrete nouns; they are in complementary distribution with the first type, the EV. This second type of classificatory verb occurs in what will be referred to as a 'predication'. Two typical Enga predications, tée pi- *pay restitution (for a homicide)*, and itákí pya- *count* are exemplified in (5) and (6):

5. Akáli dúpa-me tée pi-ly-ami-nó.
man the-AG *restitution do*-PRES-3PL-DEC
The men are paying restitution (for a homicide).

6. Akáli dokó-mé mená dúpa itákí pi-ly-á-mo.
man the-AG *pig the count hit*-PRES-3SG-DEC
The man is counting the pigs.

These predications will be described and analyzed in Chapter 4.

In discussing the semantic structure of the EV and predications, lexical stems will be considered to consist of bundles of semantic features, mainly for practical reasons, since the problems noted in the section to follow have not yet been solved.

0.2 *THEORETICAL ORIENTATION AND PROBLEMS*

After years of being discredited and ignored, the study of semantics was revitalized in 1963 with the pioneering effort of Katz and Fodor which attempted not "...to present a semantic theory of a natural language, but rather to characterize the abstract form of such a theory" (1964:479). The importance of this work is emphasized by its being immediately incorporated into an integrated theory of linguistic description (Katz and Postal 1964) and its incorporation into generative transformational theory (Chomsky 1965).

The semantic theory presented by Katz and Fodor was heavily criticised[7] on several points, of which we will deal only with those of interest in the present semantic study of Enga, e.g., the idea of semantic markers (features or components). In the following sections we will briefly sketch some of the more salient points to be accounted for in a semantic study and which we intend to concentrate most heavily upon in the chapters to follow. The points include:

0.2.1 The semantic features
0.2.2 Redundancy rules in semantics
0.2.3 Various exceptions to the redundancy rules
0.2.4 Dominance relations between nouns and verbs
0.2.5 The priority of syntax or semantics.

0.2.1 The Semantic Features

Weinreich states that the idea of using features was first proposed by G. H. Matthews about 1957 and was independently worked out to some extent by Robert P. Stockwell and his students (1966:401). Lyons says that the componential approach to semantics "...has a long history in linguistics, logic and philosophy. It is inherent in the traditional method of definition by dividing a genus into species and species into subspecies; and this method of definition is reflected in most of the dictionaries that have ever been compiled for particular languages, and in the organization of such works as *Roget's Thesaurus*" (1968:472). In the componential (or feature) method, words are described semantically by factoring out the most 'basic' components. Ethnoscience has successfully applied this technique mostly within the domain of various closed contrast sets, such as kinship terms.[8]

One claim advanced for semantic components is their potential universality, i.e., that all human languages may be either partially or completely analyzed in terms of a finite set of semantic features in much the same way as can be done for phonology with distinctive features. Chomsky cites several examples which contain (formal) universals:

> Consider, for example, the assumption that proper names in any language, must designate objects meeting a condition of spatiotemporal contiguity, and that the same is true of other terms designating objects; or the condition that the color words of any language must subdivide the color spectrum into continuous segments; or the condition that artifacts are defined in terms of certain human goals, needs, and functions instead of solely in terms of physical qualities (1965:29, notes omitted).

Of course the value of a componential analysis in the semantic description of a particular language (in this case, Enga) remains unaffected by the existence (or non-existence) of possible universal components, yet such a description may be evidence to eventually confirm (or refute) the hypothesis of the universality of features.

One of the advantages of semantic features is that these allow words which have one or more features in common to be related via these features, i.e., words may be considered to be synonymous if they contain identical semantic components and descriptions. This same relation may hold between sentences, such that

> ...relations like paraphrase, entailment, etc. are suitable generalizations of lexical relations like synonymy, hyponymy, etc. This is a natural consequence of the fact that the semantic representations of sentences are in principle of the same character as lexical meanings (Bierwisch 1970:180).

Thus the semantic components may demonstrate the occurrences and show the relationships between synonyms, antonyms, and other related words. As well, the overlapping of semantic components or descriptions provides for that sub-set of items which will be discussed below and throughout this monograph as 'intersection' (cf. 0.2.3.2).

Several of the problems most frequently mentioned in connection with semantic components are

(1) that there is no discovery procedure to determine which are the 'correct' markers;
(2) how exactly are the semantic components related to the syntactic features;
(3) is the number of components needed so large as to be unfeasable;
(4) are latent markers present;
(5) do the features have 'cognitive reality'?

The discovery of semantic markers is usually demonstrated via a factoring process on such closed contrast sets as "man, woman, boy, girl, child" or "stallion, mare, gelding, filly, colt, foal" (cf. Bierwisch 1970:168 and Lyons 1968:470). This is incidentally the same method adopted in ethnoscience, which has elaborated upon the discovery techniques and methods to be used in the determination of the closed set, the features, etc. For an excellent example of this, see Berlin 1968 and references therein. Bolinger uses the same technique in demonstrating that the dualism of semantic markers and 'distinguishers' in the semantic theory of Katz and Fodor is an artificiality (1965:558ff). It is Bolinger who points out that semantic components must reflect our knowledge of the world; if not, then "Where do markers like (Animal), (Physical Object),...come from if not from our knowledge of the world?" (1965:568).

Katz and Fodor claimed that semantic and syntactic markers were distinct, an assumption that has been attacked by Weinreich, who states that

> The presence of syntactic and semantic markers with identical names (Male, Female, Abstract, etc.) offers strong *prima facie* ground for the suspicion that the distinction between semantic and syntactic markers--a distinction theoretically crucial for KF...--is ill-founded (1966:402).[9]

The large number of semantic components needed to define even just one word is one of the main problems to be faced. This is mentioned by Dixon 1971:440, Weinreich 1966:473, and Bolinger 1965:560. Briefly, the assumption is that the large (but presumably finite number) of even minimal markers needed would be but little better than a list of n words assumed to be primitives (since it is entirely possible

that the number of markers needed would be only n - 1). Practically, the idea of semantic redundancy rules (similar to those of phonology and syntax[10]), while still fraught with difficulties (cf. 0.2.2), does offer at least some hope in the semantic description of any hierarchic class of items (i.e. folk taxonomy), and semantic components have as Weinreich states "...proved their usefulness long ago" (1966:473).

Another related problem is that of latent markers, as discussed by Bolinger 1965:562ff. This is that to account for the speaker's ability to recognize an anomaly (as well as ambiguity) would require making explicit a very large number of markers or as Weinreich states it "...the need to mark each morpheme with a zero for an extremely large number of semantic features looms as a most unattractive necessity" (1966:473). Bolinger's proposed solution would be a dictionary (with one or two dozen markers per entry) for the ambiguities, and a thesaurus (with each marker appearing only once, and lexical items being linked by paths between markers) for the anomalies (1965:564). (Compare this idea of semantic networks with those to be discussed in 0.2.2).

One problem of semantic components, discussed mainly by anthropologists interested in ethnoscience, is that of the 'cognitive reality' or 'validity' of the semantic components themselves. The problem is that to differentiate any items in terms of only one feature, as animates in terms of their sex (i.e., as man-woman, bull-cow, etc.), is to emphasize only one of the many relevant features which may distinguish the items:

> If one asks a young child (most of whose utterances are perfectly acceptable and manifest the same semantic relationships, as far as one can judge, as the utterances of his elders) what is the difference between men and women, he might answer by listing a whole set of typical characteristics--the kind of clothes they wear, how their hair is cut,... Why should one suppose that sex is the sole criterion even in adult speech? (Lyons 1968:478).[11]

This question of the 'cognitive reality' of semantic components is unsolvable (at present, at least), and anthropologists are divided, with some claiming that the question is irrelevant, others that the systems postulated are cognitively real, and yet others that such a cognitive reality may exist but that it must be demonstrated by operations external to the methods of analysis.[12]

0.2.2 Semantic Redundancy Rules

The possibility of semantic redundancy rules is not mentioned by Katz and Fodor in their semantic theory. Chomsky applied the notion

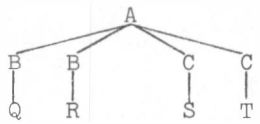
of redundancy rules as used in phonology by Halle (1959a and b) to syntax to form syntactic redundancy rules. He states that these rules "are designed to deal with the fact that certain phonological feature specifications are predictable, given others" (1965:168). A distinction is made between conventions (these are "...universal, and therefore need no specific statement in the grammar" (1965:168)) and redundancy rules, which are "...particular to a given language, and therefore must be given in the grammar" (1965:168). The redundancy rules will

> make a distinction between "possible, but nonoccurring lexical entry" and "impossible lexical entry", precisely as the phonological redundancy rules do... But in general not all of the possibilities will be actually realized in the lexicon...the possible but nonoccurring lexical entries have the status of "accidental semantic gaps" in the sense that they correspond to lexical items that the language does not provide for specifically but could in principle incorporate with no alteration of the general semantic system within which it functions (1965:170).

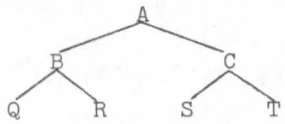
Gething (1968) presents an application of redundancy rules to semantics (i.e., to a closed set of terms for Buddhist religious functionaries), which presents one solution to the facts presented above of the potentially large number of semantic components necessary for an analysis. He does this by first assuming that only pertinent features of a word are listed, with a general rule for the entire lexicon which states that features not listed for an item are non-applicable to it. Furthermore, predictable (and thus redundant) features are isolated and reduced by a set of rules, so that the lexicon contains only the 'emic' (non-predictable) lexical entries. This quite considerably reduces the semantic markers needed--in Gething's example of religious terms, only one feature, relative status, is actually needed in the entry. That this is possible (i.e., to reduce the features to only one, plus a set of redundancy rules) is largely the result of the hierarchic nature of the data chosen by Gething.

In the case of non-hierarchic items semantic redundancy rules face a very real challenge. A discussion of this is presented in Weinreich (1966:408f) and briefly here. Weinreich argues that Katz and Fodor give an over-simplified view of the problem by exemplifying trees as pure taxonomies, such that (7a) can be represented by (7b):[13]

7a.



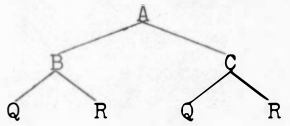
7b.



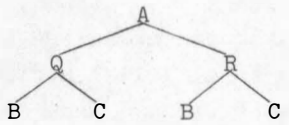
And, as Weinreich points out, many dictionary entries tend to form matrices of features, as in (8a), and "there is no motivated reason

to rewrite them as...[8b]; the only economy would be achieved by representations such as...[8c,d,e]" (1966:409):

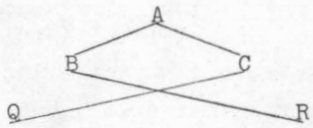
8a.



8b.

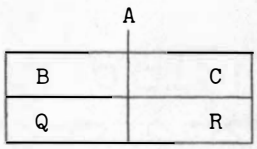


8c.



8d.

8e.



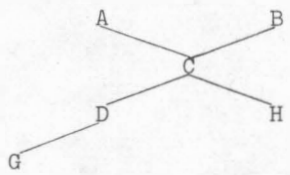
This problem (cross-classification) is also discussed by Chomsky (1965:79-86), who credits G. H. Matthews with first discovering it and with one solution via indexing category symbols. Chomsky mentions some other solutions by Stockwell and Schachter, and Bach; and states that the "problem is very much open, and deserves much further study" (1965:213). Thus cross-classification would clearly present a major difficulty in the formulation of semantic redundancy rules for any non-hierarchic items.

Weinreich also deals with the problem of reconvergence of markers, which he states is such that "...the criteria of a fixed order of markers and a fixed form of branching may be mutually irreconcilable" (1966:408). The problem is exemplified by the entry for 'fox':

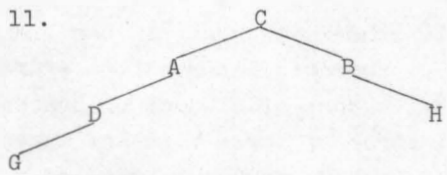
9. fox → (Object) → (Animate) → $\begin{matrix}\text{(Human)}\\\text{(Animal)}\end{matrix}$ → (Cunning) →...

The entry for (9) with a fixed order of markers would be represented as (10), and with a fixed form of branching (i.e. the non-reconvergence of branches) as (11):

10.



11.



Weinreich criticizes Katz and Fodor for their belief that Boolean operations are "...an adequate model for combinatorial semantics" (1966:411), and that one "would have thought that with the development of the calculus of many-place predicates, the logic of Boolean

(one-place) predicates would be permanently dropped as a model for natural language" (1966:411).

As Weinreich also states, one of the major motivations of semantic research has been a "desire to analyze a global meaning into components, and to establish a hierarchy among the components..." (1966: 405). Yet as we have seen above, semantic redundancy rules can account only for hierarchically-ordered systems (or sub-systems) of semantics, and cannot account for instances of cross-classification and re-convergence of features. One possible solution to the latter problem has been offered in the idea of semantic 'networks', but the idea remains to be developed and tested.[14]

0.2.3 Exceptions

Chomsky has said that exceptions "...are rarely lacking, in a system of the complexity of a natural language" (1965:218). A complete description of any language, and a theory of competence for that language, must include an account of exceptions, in particular, those exceptions which occur systematically in relation to the main system.[15] The exceptions are that very small number (five percent or less) of cases in a natural language which contradict the main system of rules used to account for the majority of items in that particular system. This topic of exceptions is of importance to theoretical linguistics, since they are present in natural languages (in contrast to artificial languages whose rules allow for no exceptions) and since they must therefore be accounted for by a theory of competence. The attempt to account for exceptions is obviously to try to formulate rules to account for the regularities of the exceptions in terms of the main system: i.e., to formulate a sub-system of rules for 'breaking' the main system of rules.[16]

Throughout the chapters to follow we will be dealing with three kinds of exceptions present in the semantic system of Enga nouns and verbs.

1. the assignment of loan items
2. semantic intersection of features
3. change of classes or states

For all three of these kinds of exceptions (and possibly for all exceptions in any language), the major point to be noted is that the exceptions do not occur in free or random distribution, but are always contained within certain limits. This will be discussed in more detail in the following sections dealing with the specific kinds of exceptions we will encounter and discuss for Enga.

0.2.3.1 *Loan Items*

Although the number of loan items in any language is a small proportion of the total vocabulary, these form a subset of interest in semantic study since they may be used to test the main set of rules as to degree of predictability. The features whereby loan items are assigned to classes thus provide a mechanism for testing the validity of the semantic features postulated for non-loan items. The assignment of loan items may depend on such features as the prestige of the source language (English or Tok Pisin into Enga); the group associated with the introduced item (missionaries, government, business, etc.) and other socio-linguistic factors. Generally we would postulate the assignment of loan items by the culturally-determined relevant features as being assimilated into Enga classes of the greatest similarity (i.e., having the same features).

The features which determine the assignment may also vary, i.e. phonetically, morphologically, or semantically. In cases where gender, for example, is marked phonetically, the loan item may be quite arbitrarily assigned to a class based upon its phonology: as in Spanish, the **-a** ending influencing the assignment of the Inca loan word **llama** into the feminine class.[17] When the system is based on morphology, this also takes precedence: as in German, the **-lein** and **-chen** demanding neuter classification, and over-riding the semantic feature of [+Female] in the cases of **das Mädchen** and **das Fräulein**.[18] In semantically based systems, the criteria are semantic: in Tarascan, with emphasis on features of shape, cars are usually classed as one-dimensional, but the Volkswagen is classed as three-dimensional "because of its roundish, bug-like quality" (Friedrich 1970:386).

The failure of a system of rules to account for the appropriate assignment of loan items would indicate a basic fault within the system's features or rules, and conversely, the correctly predicted assignment (i.e. if this agrees with the classification as made by native speakers) would allow us to assume at least some degree of validity for the postulated system of features and rules. Thus, loan items are, strictly speaking, not exceptions to the main body of rules, but instead allow the testing of this system. Loan items are included in this section since, in their small percentage of occurrence in the total vocabulary, they have one of the main characteristics of exceptions, i.e., they constitute a small but regular portion of the main system.

0.2.3.2 *Intersection*

As mentioned above, one of the advantages of semantic components is that these allow words which have one (or more) features in common to be related via these common features.[19] Definition by synonyms is often used in lexicography, where, as Bolinger states

> the sense is characterized by an overlap of the semantic ranges of two other terms presumed to be already known, and two are the minimum necessary to have an overlap. Of course it can be argued that this is just a shorthand way of saying'X has those markers of Y and Z that are not mutually exclusive'... (1965:565).

Synonyms and near-synonyms present a case of interest for semantic analysis. In fact, Weinreich has suggested that the most important problem in semantic description (and lexicography) is to delimit the signification of near-synonyms: "On the whole, a semantic description should not aim at "absolute" definitions, but at definitions which delimit the meaning of a term from that of terms with similar meanings (synonyms)" (1962:30).[20] Intersection thus involves non-mutually exclusive semantic markers, or as Friedrich states "...an identity or close similarity of meaning with respect to one or more semantic features in two or more discrete, semantically or distributionally defined sets" (1970:396).

In any noun class or gender system, this intersection (or sharing) of one or more semantic markers might well result in conflict in the class assignment. Thus, as cited above, in Tarascan cars are generally assigned into the one dimensional class, but the Volkswagen's 'bug-like' features intersect with the three dimensional class and it may also be classed within the three dimensional class. Dixon cites a joking reference to a hermaphrodite, "the use of the non-normal class II marker pointing out the female characteristics of this 'man'" (1968:111). The item itself may be ambiguous, as ribbons, with features of both length and flatness, which in Tarascan may be assigned to either (or both) shape classes (Friedrich 1970:385). Friedrich also cites the humorous 'How many women does Pancho have' with the reply 'three ira-hku', "thereby implicitly classing his plump mistresses with pots because of their three-dimensional bottoms" (1970: 385). Sapir has observed Navaho gender rule breaking during punning (1932). Thus, a few of the possibilities that offer themselves in explanation are that the referent itself may be ambiguous; the context or linguistic situation may be ambiguous; cases of humour and punning; cases of teasing or naughtiness; individual idiosyncracies; and errors of performance.

The cases of intersection thus present data on the semantic features of the system which may be either the same or very similar, and also provide information on the linguistic context, and the ways in which the features may be manipulated by the native speaker. In most class systems it is also such that a most neutral or residue class is present. This class is likely to be illuminated by the analysis of the intersecting items, since it may well be the most frequently occurring in these cases.[21]

0.2.3.3 *Change of Class*

In any system of semantics, it is also possible for a small number of items to change their semantic class, depending upon the semantic features of the system. In Tarascan, where the classification "...often depends on the shape as perceived in the context of a particular speech situation" (Friedrich 1970:385), the change of class of a long, deflated (and thus one dimensional) balloon into a round (thus three dimensional) inflated balloon is reflected in the numeral classifiers used for the two different states. Also, human infants may be classed as shaped objects (class I), but when capable of speech (and thus rational) are classed as class II (Friedrich 1970: 385).[22]

In the case of the English 'natural' gender system, the pronominal reference to a particular referent may change if the referent noun undergoes a change of state: the most usual one in English probably being that of a male being altered to a gelding (i.e., a castrated male). For English we could postulate a 'gelding' rule, whereby the referential change from colt to gelding or bull to steer could be predicted:

> If X is a male animate (pronominal reference 'he') and is gelded, future reference to X should be as 'it'; (but also, possibly still as 'he').[23]

The items which may experience change of state (though usually few in number) are of interest in a semantic description, since they highlight the features involved in the change, as above, when the features are [+Sex] for geldings, in Tarascan [+Speech, Rational] for human infants, and [+Long, One Dimensional] to [+Round, Three Dimensional] for balloons.

0.2.4 Dominance Relations between Nouns and Verbs

One of the basic assumptions made in generative grammar is that the nouns and verbs are of equal status, i.e., that neither 'governs'

the other. Chomsky 1965 discusses whether selectional rules should be incorporated into the grammar either in terms of the nouns' dominance (i.e. nouns are assigned features, and the verbs are selected with reference to nouns) or in terms of the verbs' dominance (the verbs are assigned features and the nouns selected in terms of the verbs). Within the framework then presented, Chomsky demonstrates that the selection of nouns in terms of the verbs (i.e., verb dominance) introduces "considerable complication of the grammar" (1965: 115), and that the best solution (in terms of formal simplicity) is to assign features to nouns (i.e., noun dominance).

This solution was attacked in Matthews' review as 'rather trivial'. Matthews continues:

> Although we may have fallen into the habit, as linguists, of using 'inherent'-type terms for Nouns and 'contextual'-type terms for Verbs (e.g. 'Animate' Nouns but Verbs 'which can take an Animate Subject'), there is no certainty that this reflects a valuable intuition about language. It may simply reflect the fact that it is easier to find notional labels for Noun-classes than it is for Verb-classes (1967:131).

Chomsky had hoped that "...a similar argument could be given for any language" (1965:115), yet more recent investigations in this area would seem to indicate that, even if noun dominance is of greater simplicity in English, this is by no means necessarily so in other languages.[24] For example, Miller (1970) has presented evidence for the choice of verb dominance in Russian (rather than the Chomskian-noun dominance)

> If the choice of verbs were made conditional on the choice of noun features, two dependency systems would operate in the grammar: adverbs would be dependent on verbs and verbs would be dependent on nouns. However, if the choice of noun were made conditional on the choice of verb features, the grammar would contain one single dependency system with both nouns and adverbs dependent on verbs (1970:501).

Note also that verbs in the *Aspects* model may in fact assign features to co-occurring nouns: in the example of 'gored by a kudu', the verb 'gore', which implies 'pierce with a horn or sharp object' assigns the feature of [+horn or sharp object] to the noun 'kudu'.[25] This problem will merit additional discussion in the conclusion to Chapter Two, when we will attempt to determine the dominance relations which hold for Enga classificatory verbs.

0.2.5 The Priority of Syntax or Semantics

On this topic Chomsky originally states

> ...one should not expect to be able to delimit a large and complex domain before it has been thoroughly explored. A decision as to the boundary separating syntax and semantics (if there is one) is not a prerequisite for theoretical and descriptive study of syntactic and semantic rules. On the contrary, the problem of delimination will clearly remain open until these fields are much better understood than they are today (1965:159).

and further

> ...it should not be taken for granted, necessarily, that syntactic and semantic considerations can be sharply distinguised (1965:77).

One of the major controversies today is between the Interpretive and Generative Semanticists, one assuming priority of syntax, the other of semantics.[26] One area where these two schools differ is that of selectional restrictions. Chomsky (1965) treats these as a matter for syntax (not semantics), yet as Lyons states, the more traditional view is often that selectional restrictions are semantic, since such deviant sentences as '*Colorless green ideas sleep furiously' can be described as "'grammatical, but meaningless'" (1970:136) as compared to 'Brainless little things type furiously'.[27] And, as Lyons concludes,

> ...concentration upon the complex interrelations that exist between syntax and semantics, and the attempts that are being made to formalize these by the 'generative semanticists', cannot but contribute to our understanding of the structure of language (1970:138).

This topic is of interest here, since one of the major problems to be confronted is how to account for the features of the classificatory verbs, i.e., via segments (and thus as part of syntax) or via features (and thus as part of semantics). In either case, we will be able to take recourse to essentially the same solution, which has varying names, i.e., segment shifting (for the segments) following Jacobs and Rosenbaum (1968:66f), or feature spreading (for the features) following Givon 1969, 1970, Mould 1971 and Voeltz 1971. This problem will also merit additional discussion in the conclusion to Chapter Four, where we will discuss in detail the state of Enga classificatory verbs.

0.3 *DATA COMPILATION*

This study is based on data compiled in the form of a monolingual Enga dictionary, which resembles an Enga version of Webster's Third, plus (to some extent) encyclopedia.[28] The dictionary contains 5,445

entries, each of which may contain up to thirty-three different kinds of (mostly) linguistic information: syntactic categories, semantic domain, semantic features, an English gloss, whether the entry is a loan item or not, a thesaurus, cross-referencing to synonyms and near-synonyms, illustrative sentences from texts, citations and references to the entry in the published literature on Enga, various sources of all information (i.e., references to informants, notebooks, tapes, texts, and transcribed materials), and the folk definitions used to define the entry. The sorting and arranging of this information was carried out using the Australian National University IBM 360 computer, using data processing techniques described in Lang, Mather and Rose (1973).

The monolingual folk definitions comprise the core of the dictionary, and details of the elicitation techniques used to obtain these are presented in Appendix B, where the techniques are compared and contrasted to a similar study of Papago folk definitions by Casagrande and Hale (1967). A portion of the material contained in the dictionary (basically an Enga word list with English index) has been published separately (Lang 1973).[29]

Details on informants are presented in Appendix B.

N O T E S

1. Cf. Capell 1962, 1969, and Wurm 1964.

2. Cf. Bee 1965, Dutton 1969, Franklin 1971, A. Healey 1964, P. Healey 1965a and b, McElhanon 1970, Lang 1970, Laycock 1965, Wilson 1969, et al.

3. Cf. Section 1.1 following for more details on Enga.

4. The comparative chapter (5.0) shows that these verb forms have been noted in Papua New Guinea languages, but have not before been analyzed as classificatory verbs. Pawley (1966:196) states that Karam noun bases co-occur in verb phrases as either subjects or objects. Rule (nd) notes that Huli existential verbs form noun classes (cf. Chapter Five); Pawley (1966:196) states that Karam noun bases co-occur in verb phrases as either subjects or objects, and he writes that Karam is a "verb classifying language" (1969:30).

5. The term 'pseudo' classificatory verb is from Landar (1964).

6. The following list of phonemes is for the reader's convenience:

/p, t, k, b, d, g, s, j, m, n, ny, l, ly, w, y;
i, e, a, o, u; ` , ´/

/t/ quite often has a voiced alveolar trill allophone intervocalically; /k/ as a rule is fricativized between low and back vowels; /b, d, g/ are all prenasalized; /s/ word-initially is [ts], intervocalically it fluctuates between [dz] and [z]; /j/ is phonetically [ndz] or [ndž]; /l/ is a voiced retroflexed flap; all syllables are open and final vowels are devoiced.

Tone is contrastive

/pílyo/ ['pílyò] *I strike*
/pilyó/ ['pílyó] *I do (work)*

7. Cf. Bar-Hillel 1967, Bolinger 1965, Dixon 1963, 1964, Ellis 1964, Lyons 1966, Staal 1965, Weinreich 1966, and others; also Postal 1966.

8. Cf. Goodenough 1956, Lounsbury 1956, Frake 1960, Wallace and Atkins 1960, and Rommey and D'Andrade (eds.) 1964. For colour terminologies, see Conklin 1955 and Bulmer 1968; for ethnobotany see Berlin *et al.* 1966, and Conklin 1954; and for ethnozoology see Bulmer 1957.

9. Weinreich substantiates his claims, but due to limitations of space, these will not be presented here (cf. Weinreich 1966:402-5). Cf. Chomsky 1965:88, 110, 119f.

10. Cf. Halle 1959a and b, Chomsky and Halle 1968.

11. Lyons' point is well taken, but discussion with Ranier Lang and Lyle Steadman on ethnoscience clearly implies that the difference is sex, i.e., in experiments showing a man dressed in women's clothes, a man with long hair, etc. Similarly, in questioning a child as to the difference between men and women, my subject replied "Men have a penis" (Craig Steadman, personal communication), which would seem to indicate that sex is the prime marker, with hair length, clothing, etc. as secondary considerations. Also, the Enga patriline consists of men who are 'of one penis' (pongó mendái).

12. Cf. Tyler 1969:343-432.

13. Weinreich's examples have been re-numbered for this presentation.

14. Matthews 1967:149f. speaks of "collocational networks"; Hays extended this idea to semantic networks (personal notes from lectures, Summer 1966).

15. We do not presuppose that features of performance, such as feeble-mindedness, aphasia, intoxication, insanity, etc. would need to be dealt with in such an account.

16. This problem could be regarded as an infinite regression (i.e., exceptions to the exceptions to the exceptions), until some (arbitrary) cut-off point is reached.

17. John and Irma Harris have provided the Spanish example. They point out, though, that this is true only for Mexican and Castilian Spanish, while in Peru **llama** is referred to as **el** (i.e., is regarded as masculine).

18. Professor George Grace noted that the switch in pronominal reference (from **es** to **sie**) during conversation would be a topic for additional study.

19. Dixon 1971 states "Words of similar meaning are now directly related through their semantic descriptions having one or more features in common" (p.440).

20. Weinreich also gives the account of an experiment in which graduate students attempted (with very poor results) to distinguish between a set of eight synonyms (1962:27).

21. The comparison between intersection and cross-classification (0.2.2 above) is worthy of additional attention.

22. Human infants present an interesting case for cross-cultural study. Culturally, what marks the change of state that results in the different references? In English, the possibility might be 'capable of speech'. In Enga, infants are marked 'incapable of rational thought'.

23. Even in the case of pets, which generally retain the original pronominal reference after 'alteration', 'she' is not acceptable for a male neutered pet. Note that modern sex change operations (resulting in what would be a male → female change) are not recognized by the Kammergericht Berlin (Dahl and Heidemann 1973), i.e., legally a man cannot ever become a woman.

24. Prior to Chomsky 1965, Hays had presented his notion of dependency theory (1964), in which the verb dominated everything else.

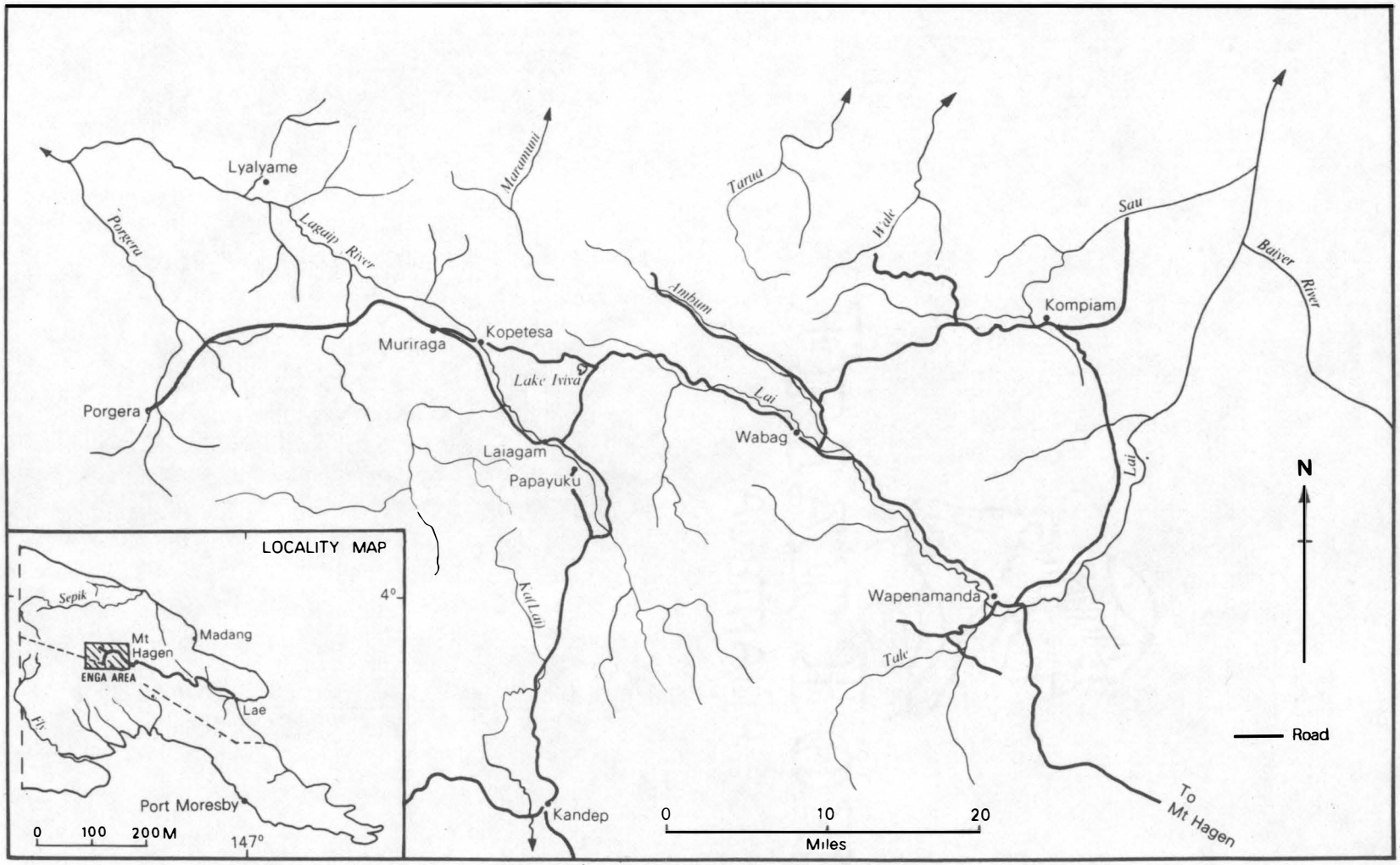
25. Mathias 1968:13f. discusses various possibilities in which the verb may assign features to co-occurring nouns.

26. This is a vastly oversimplified view. Cf. Chomsky 1968 and 1969.

27. This example is from Ranier Lang.

28. The monolingual dictionary was intended to be encyclopedic.

29. Lang (1973) also contains a complete listing of the sources for all the main items of the monolingual dictionary. The original Enga word list incorporated about 2,000 items from word lists and vocabularies made available to the author by courtesy of various missionaries working in the Enga area. One of these, that of Rev. O. Hintze, included the Enga item, the English gloss, and the word class of the Enga item, for approximately one thousand items. This Enga word list (of 2,000 items) formed the base for the elicitation of the monolingual folk definitions and all the other material contained in the present monolingual dictionary.



MAP 1: THE ENGA AREA

CHAPTER ONE

1.1 *THE ENGA*

The Enga, who number more than 150,000, live in mountainous country in the Enga District of Papua New Guinea. They occupy an area which stretches from the western slopes of Mt. Hagen westwards to Porgera (see Map 1). This area is drained by the Minyamp, Ambum, Lai, Sau, and Upper Maramuni Rivers, which flow into the Sepik; the Lagaip River (to beyond the junction of the Porgera River), which flows into the Strickland, and the Tari River. The Kyaka Enga, who live to the north of Mt. Hagen township, occupy the area drained by the Baiyer River.

The Enga are primarily sedentary gardeners but also keep pigs and fowls. The staple crop is sweet potatoes grown in the efficient system of long fallowing (see Waddell 1972); these are augmented by other root and leaf vegetables. A limited amount of coffee (among the Central Enga) and pyrethrum (among the Laiagam Enga) are grown as cash crops; cattle have also been introduced by the Australian Administration.

Pigs, pearl shells, axes and plumes are the conventionally accepted items of wealth which circulate freely, and exchanges of these valuables mark all significant social occasions. Pigs form the major item in the *tée* exchange.[1] Until the coming of the Pax Australiana, Enga clans constantly fought each other over land, and women and to avenge previous killings.

The people belong to named localized exogamous patriclans; they live in homesteads scattered throughout the clan territory, which has a sharply defined boundary. Traditionally men and women occupied separate houses, since women were thought to be unclean and dangerous to men, who had to use magic to protect themselves from female pollution. There are no hereditary chiefs or headmen: instead wealthy men of

influence and power, (who have some of the characteristics of the self-made Big Men commonly found in Melanesia) control the initiation and direction of the political and administrative activities of each clan. The Enga are notable among the Highlanders for their pragmatic concern with the manipulation of wealth in various forms (the traditional death payments, tée exchange, modern trade stores, cattle raising, and coffee and cash crops) and the extension of a wealthy man's influence through the social system.[2]

1.2 *GRAMMATICAL SKETCH*

Publications on the Enga language in professional journals are a short dictionary (Crotty 1951), and an account of some syntactical features of Enga as contrasted to the Greek syntax of the Gospel of Mark (Burce 1965). The most detailed study of any one aspect of Enga, however, has been made by Lang (1970), an account of Enga questions and answers; he has also produced a brief grammatical sketch which is available in the Enga Dictionary (Lang 1973). The present study will not attempt to duplicate the description of Enga syntax, but attempts to elucidate other aspects not previously described, i.e., the semantics of the classificatory verbs. This would be difficult to do without some general account of the structure of Enga, and so this is provided in the following section.

Most of the work on the language has been done by the missions in the Enga area: the New Guinea Lutheran Mission-Missouri Synod and the Catholic missions working mainly on the Mae dialect, and the Australian Baptist Missionary Society working on the Kyaka dialect. The missions have produced a sizable body of material on the language, which is available to anyone interested in research.[3]

1.2.1 The Noun

Since the focus of this monograph is on the Enga verbs, this section will deal only briefly with the Enga nouns.

Enga nouns co-occur with the determiners dóko *the* and méndé *a, some, else*

1. Akáli dóko epe-ly-á-mo.
   man the come-PRES-3SG-DEC
   The man is coming.
2. Akáli méndé epe-ly-á-mo.
   man a come-PRES-3SG-DEC
   A man is coming.

Nouns may be inflected for cases, such as agentive (3), instrumental (3), possessive (3), locative (4, 5, 6), and temporal (7):

3. Akáli dokó-mé émba-nya mená dóko uaa-mé p-í-á.
man the-AG *you*-POSS *pig the axe*-INST *hit*-FP-3SG
The man killed your pig with an axe.

4. Akáli dóko omó-nyá pe-ly-á-mo.
man the over.there-LOC *go*-PRES-3SG-DEC
The man is going over there (on the same level).

5. Akáli dóko ee-sá ténge-sa pe-ly-á-mo.
man the garden-LOC *near*-LOC *go*-PRES-3SG-DEC
The man is going near the garden.

6. Akáli dóko andá-ka pe-ly-á-mo.
man the house-LOC *go*-PRES-3SG-DEC
The man is going home.

7. Akáli dóko kotáka-sa pe-ly-á-mo.
man the noon-TEMP *go*-PRES-3SG-DEC
The man is going at noon.

Noun classes have not been studied in detail in Enga and will be only briefly discussed in the following section. The classes have been based primarily on syntactic features of the Enga cases as listed above (1-7). In addition, other features[4] are given for the classes of most interest for this work, i.e. those which co-occur with the classificatory verbs. The classes to be discussed are: N_1 Animates, N_2 Pronouns, N_3 Body Parts, N_4 Inanimates, N_5 Locationals, N_6 Events, N_7 Colours, N_8 Inner States, and N_9 Minor Classes. Of these classes, only certain nouns of class N_9 may occur with the temporal suffix, therefore this suffix will be ignored for the other classes. The classes and their case distribution are presented in Chart 1.1; occurrence with the classificatory verbs is marked in the last two columns.

CHART 1.1: NOUN CLASSES

Noun Class	DET		AG	POSS	INST	LOC	EV	Predi-cations
	dóko	méndé						
N_1 +animate	x	x	x	x			x	
N_2 +animate (Pronouns)			X	X			X	
N_3 -animate (Body Parts)	X	X			x	x	x	
N_4 -animate +artifacts (?)	x	x		x	X		x	
N_5 +location						x	x	
N_6 (events)	x	x						x
N_7 (colour)	x	x						x
N_8 (inner state)			x					x

N_1 *Animates*

Nouns of this class are marked [+animate], also implying [+concrete]. The subclass of kinship terms which occurs in this class is marked [+inalienable], and a second subclass, proper names, is marked [-common]. Some members of the kinship subclass are: **takánge** *father*, and **endángi** *mother*.[5] Some members of the proper names subclass are: **Aluá** (man's name), **Pasóne** (woman's name), and **Pépe** (boy's name). Other members of this class are: **mená** *pig*, and **néné** *Arthropoda*. All members of this class may occur with the determiner in a demonstrative sense (8) and the indefinite determiner in an emphatic sense (9), and with the agentive (10), and possessive (11) cases; they are not used instrumentally (12) or locatively (13).

8. **Aluá dóko** **epe-ly-á-mo.**
   Alua the *come*-PRES-3SG-DEC
   That Alua is coming.

9. Aluá méndé **epe-ly-á-mo.**
   Alua a *come*-PRES-3SG-DEC
   One of the Aluas is coming.

10. Alua-mé mená dóko p-í-á.
Alua-AG *pig the hit*-FP-3SG
Alua killed the pig.

11. Baa-mé Alua-nyá mená dóko p-í-á.
he-AG *Alua*-POSS *pig the hit*-FP-3SG
He killed Alua's pig.

12. *Baa me mena doko Alua-me p-i-a.
he-AG *pig the Alua*-INST *hit*-FP-3SG
He killed the pig with Alua.

13. *Baa Alua-sa pe-ly-a-mo.
he Alua-LOC *go*-PRES-3SG-DEC
He is going to Alua.

N_2 *Pronouns*

This group is a small closed set:

nambá *I*	nalímba *we two*	náima *we* (pl)
émba *you*	nyalámbo *you two*	nyakáma *you* (pl)
baá *he, she, it*	dolápo *they two*	dúpa *they* (pl)

plus the dialectal variants of these. Nouns of this class are, like N_1, marked [+animate] and, like the subclass of kinship terms, [+inalienable]. However, members of this class differ from N_1, since they may not occur with determiners (14, 15). They are similar to N_1 in that they may occur in the agentive (16) and possessive (17) cases, but not in the instrumental (18) or locative (19).

14. *Baa doko pe-ly-a-mo.
he the go-PRES-3SG-DEC
The he is going.

15. *Baa mende pe-ly-a-mo.
he a go-PRES-3SG-DEC
Some he is going.

16. Baa-mé mená dóko p-í-á.
he-AG *pig the hit*-FP-3SG
He killed the pig.

17. Baa-mé namba-nyá mená dóko p-í-á.
he-AG *I*-POSS *pig the hit*-FP-3SG
He killed my pig.

18. *Baa-me mena doko namba-me p-i-a.
he-AG *pig the I*-INST *hit*-FP-3SG
He killed the pig with me.

19. *Baa namba-sa pe-ly-a-mo.
he *I*-LOC *go*-PRES-3SG-DEC
He is going to me.

N_3 *Body Parts*

Nouns of this class are [+inalienable] like the subclass of kinship terms in N_1; they are, however, also [-animate]. Some nouns of this class are: kíngi *arm*, pungí *liver*, and yanúngí *skin, body*. This class is similar to N_1 in that they may occur with determiners (20, 21); they differ in that they may be inflected for the instrumental (22) and locative (23), and that they may not be used with the agentive (24) or possessive (25) cases.

20. Móko dóko tándá py-ú-mu.
leg the pain do-PRES.3SG-SENSE
(My) leg is paining.

21. Móko méndé tándá py-ú-mu.
leg a pain do-PRES.3SG-SENSE
One of my legs is paining.

22. Baa-mé mená dóko moko-me p-í-á.
he-AG *pig the leg*-INST *hit*-FP-3SG
He hit the pig with (a) leg.

23. Moko-nya tándá py-ú-mu.
leg-LOC *pain do*-PRES.3SG-SENSE
It is paining in the leg.

24. *Moko-me mena doko p-i-a.
leg-AG *pig the hit*-FP-3SG
**The leg killed the pig.*

25. *Baa-me moko-nya yanungi doko p-i-a.
he-AG *pig*-POSS *skin the hit*-FP-3SG
He hit the leg's skin.

N_4 *Inanimates*

This class is marked [+concrete] and [-animate]. Some nouns of this class are: uaá *axe*, ándá *house*, and íta *tree*. Nouns of this class can occur with the determiners (26, 27) and instrumental (28); they contrast with the previously discussed classes, since they cannot occur with the agentive (29), possessive (30) or locative (31) cases.

26. Émba-me (nambá) uaá dóko d-í-í.
you- me axe the give.INCL-IMM.IMP-2SG
Give me that axe!

27. Émba-me (nambá) uaá méndé d-í-í.
you-AG *me axe a give*.INCL-IMM.IMP-2SG
Give me an axe!

28. Baa-mé mená dóko uaa-mé p-í-á.
he-AG *pig the axe*-INST *hit*-FP-3SG
He killed the pig with (an) axe.

29. *Uaa-me mena doko p-i-a.
axe-AG *pig the hit*-FP-3SG
(The/an) axe killed the pig.

30. *Emba-me (namba) uaa-nya ende doko d-i-i.
you-AG *me axe*-POSS *end the give*.INCL-IMM.IMP-2SG
Give me the axe's end!

31. *Baa uaa-sa pe-ly-a-mo.
he axe-LOC *go*-PRES-3SG-DEC
He is going to (where) the axe (is).

N_5 *Places*

Nouns of this class are in one of two subclasses, either [+common], or [-common]; all are [+location]. Some nouns in this class are: eé *garden*, kákasa *bush*, Wápaka *Wabag* (a place), and Lakáipa *Lagaipa* (a river). This class contrasts with all previous classes in that it can occur only unmarked for the [-common] subclass (32a) or in the locative case (32b) for the [+common] subclass; it cannot occur with the determiners (33, 34), the agentive (35), the possessive (36) nor the instrumental (37) cases.

32a. Baá Wápaka pe-ly-á-mo.
he Wabag go-PRES-3SG-DEC
He is going to Wabag.

32b. Baá eé-sá pe-ly-á-mo.
he garden-LOC *go*-PRES-3SG-DEC
He is going to (the) garden.

33. *Wapaka doko pe-ly-a-mo.
Wabag the go-PRES-3SG-DEC
The Wabag is going.

34. *Wapaka mende pe-ly-a-mo.
Wabag a go-PRES-3SG-DEC
A Wabag is going.

35. *Ee-me mena doko p-i-a.
garden-AG *pig the hit*-FP-3SG
Garden killed the pig.

36. *Baa-me ee-nya mena doko p-i-a.
he-ag *garden*-POSS *pig the hit*-FP-3SG
He killed the garden's pig.

37. *Baa-me mena doko ee-me p-i-a.
he-AG *pig the garden*-INST *hit*-FP-3SG
He killed the pig with (a) garden.

N_6 *Events*

Nouns of this and the following classes differ from all the preceding classes in that they co-occur with particular verbs in the second type of classificatory verbs, the predications discussed in Chapter 4. Marked [+occurrence], these are nouns and not verbs or verb parts, since they cannot be inflected for person number or tense (38), but instead must be expressed with a co-occurring verb (39).

38. *Pipuli-ly-a-mo.
magic-PRES-3SG-DEC
He is magicing.

39. Pípuli le-ly-á-mo.
magic utter-PRES-3SG-DEC
He is magicing.

Some typical nouns of this class are: betá *compensation payment*, tée *pig exchange/death payment*, pípuli *work magic*, and mána *instruction.* Nouns of this class can occur with the determiners, (40, 41) and in the agentive (42); they do not occur in the possessive (43), instrumental (44) or locative (45) cases.

40. Baa-mé pípuli dóko le-ly-á-mo.
he-AG *magic the utter*-PRES-3SG-DEC
He is working the magic.

41. Baa-mé pípuli méndé le-ly-á-mo.
he-AG *magic a utter*-PRES-3SG-DEC
He is working some magic.

42. Pípuli-me kuma-s-í-á.
magic-AG *kill*-CAUS-FP-3SG
Magic killed him.

43. *Baa-me pipuli-nya yangi le-ly-a-mo.
he-AG *magic*-POSS *some* *utter*-PRES-3SG-DEC
He is working some of (the) magic.

44. *Baa-me mena doko pipuli-mi p-i-a.[6]
he-AG *pig* *the* *magic*-INST *hit*-FP-3SG
He killed the pig with magic.

45. *Baa pipuli-sa pe-ly-a-mo.
he *magic*-LOC *go*-PRES-3SG-DEC
He is going to magic.

N_7 *Colour*

Nouns of this class are [-concrete] and co-occur with the predications, usually in the stative form. These are more fully discussed in Section 4.1.3. Some nouns of this class are wené pyápae *blue, purple*, kyóo lápae *white*, and taiyóko pípae *red*. They occur with the determiners (46, 47), but do not occur in the other cases (48, 49, 50, 51).

46. Sakápae dokó d-í-í.
green *the* *give*.INCL-IMM-IMP-2SG
Give me the green (one).

47. Sakápae méndé d-í-í.[7]
green *a* *give*.INCL-IMM-IMP-2SG
Give me a green (one).

48. *Sakapae-me mena doko p-i-a.
green-AG *pig* *the* *hit*-FP-3SG
Green killed the pig.

49. *Baa-me sakapae-nya mena doko p-i-a.
he-AG *green*-POSS *pig* *the* *hit*-FP-3SG
He killed green's pig.

50. *Baa-me mena doko sakapae-me p-i-a.
he-AG *pig* *the* *green*-INST *hit*-FP-3SG
**He killed the pig with green.*

51. *Baa sakapae-sa p-i-a.
he *green*-LOC *hit*-FP-3SG
He's going to green.

N_8 *Inner State*

Nouns of this group are [+inner state] and, unlike N_6 (Events), may be inflected for person-number and tense in at least one dialect of Enga (52); see also Section 4.1.6. In the other dialects of Enga these occur in the predications (53).

52. Pake-ly-á-mo. (Kyaka Enga)
fear-PRES-3SG-DEC
He is afraid.

53. Baá páká kae-ly-a-mó. (other Enga dialects)
he fear feel-PRES-3SG-DEC
He is afraid.

Some nouns of this class are: ímbu *anger*, nánú *thirst*, tándá *pain*, and auú *like, love*. Nouns of this group may occur with the instrumental case (54); they are not used with the determiners (55, 56) or with the other cases (57, 58, 59).

54. Baá paká-me kumi-ly-á-mo.
he fear-INST *die*-PRES-3SG-DEC
He is dying of fear.

55. *Baa paka doko kumi-ly-a-mo.
he fear the die-PRES-3SG-DEC
He is dying of the fear.

56. *Baa paka mende kumi-ly-a-mo.
he fear a die-PRES-3SG-DEC
He is dying of a fear.

57. *Paka-me mena doko p-i-a.
fear-AG *pig the hit*-FP-3SG
Fear killed the pig.

58. *Baa-me paka-nya mena doko p-i-a.
he-AG *fear*-POSS *pig the hit*-FP-3SG
**He killed fear's pig.*

59. *Baa paka-sa pe-ly-a-mo.
he fear-LOC *go*-PRES-3SG-DEC
He's going to fear.

N_9 *Minor Classes*

Other classes, which will not be discussed further, include the following:

Quality: koó *bad*, épé *good*, múu *short*
Quantity: lóngó *many*, ikí *only*, pitaká *all*
Location: téngesa *near*, lóndé *far*, kisá *up*
Direction: ámá *nearby-level*, ályá *near-up*, áná *nearby-down*
Time: wámbá *before*, indúpa *today*, taltá *tomorrow*, alémba *two days ago*
Number: lápó *two*, tépó *three*, akalitá mendái *ten*
Manner: moó láo *slowly*, yápá *quickly*, púpú láo *strongly*, elyakáo *stealthily*
Exclamations: kanáu *exclaim in surprise*, pongokáe *swear (to man)*
Interrogatives: ánjá *where*, apí *who*, áki *what*

The preceding classes constitute the nouns of Enga; in the following chapters we will concern ourselves only with nouns of classes one, two, three and four [concrete], six [events], seven [colour] and eight [inner state].

1.2.2 The Verb

Enga is a verb dominated language and belongs to what Capell (1969) calls the Biii languages,[8] viz., those that are event-dominated. These languages are "...probably the most widespread typologically homogeneous group in New Guinea" (Capell 1969:81).[9] Event-dominated languages of the Biii type are specifically marked by the features

i complication of the verbal system in terms of tenses and moods,
ii possession of sentence-medial and sentence-final forms,
iii absence of incorporated pronoun objects.

We will deal with these in reverse order.

1.2.2.1 *Incorporated Pronoun Objects*

Enga does not have incorporated pronoun objects (except for one instance[10]):

60.

Naba-mé *I*-AG *I*	nambá tánge *I self* émba *you* baá *he, she, it* nyalámbo *you two* dolápo *they two* nyakáma *you all* dúpa *they plural*	kandé-ly-o *see*-PRES-1SG *see.*

1.2.2.2 *Sentence-medial and Sentence-final Forms*

For each sentence there is one main verb and it always occurs in final position in the surface structure of that sentence. In a normal declarative sentence, the order is subject-object-verb:

61. Énda dokó-mé baa-nyá mená dóko p-í-á.
woman the-AG *she*-POSS *pig the hit*-FP-3SG
The woman hit her pig.

There are no conjunctions in Enga to express sentences like (62) and (63)

62. *He went and worked (at the same time).*

63. *I went and he worked.*

Instead, Enga uses a special set of verbal suffixes, which are attached to all but the final verb in the sentence. These suffixes vary, depending on whether the subjects of the two sentences are co-referential or not. Co-ordinate and subordinate sentences with co-referential subjects are called "same actor" sentences in Enga grammatical studies, and those with non-co-referential subjects are called "different actor" sentences. The two constituent sentences of (62) above, if used separately would be (64) and (65):

64. Baá p-é-á.
he go-FP-3SG
He went.

65. Baa-mé kalái p-i-á.
he-AG *work do*-FP-3SG
He worked.

Conjoined they are not

66. *Baa p-e-a-pi baa-me kalai p-i-a.[11]

but instead

67. Baa-mé pá-o kalái p-i-á.
he-AG *go*-0 *work* *do*-FP-3SG
He went and worked (at the same time).

The tense and person-number suffixes are carried only by the sentence final verb, (67a) and (67b) are ungrammatical

67a.*Baa-me p-e-a kalai pyo-o.
he-AG *go*-FP-3SG *work* *do*-0

67b.*Baa-me p-e-a-o kalai p-i-a.
he-AG *go*-FP-3SG-0 *work* *do*-FP-3SG

The two constituent sentences in (63) above would be (65) and (68):

68. Nambá p-é-ó.
I *go*-FP-1SG
I went.

However, since the subjects of (65) and (68) are not co-referential, they cannot be conjoined, for example, by the -0 marker as in (67); (69) is ungrammatical

69. *Namba pa-o baa-me kalai p-i-a.
I *go*-0 *he*-AG *work* *do*-FP-3SG

(65) and (68) can only be conjoined by preserving both the tense and person-number suffixes of both verbs. This is achieved by adding a sentence medial marker -pa to the main verb of the first of the two sentences to be conjoined:

70. Nambá p-e-ó-pa baa-mé kalái p-i-á.[12]
I *go*-FP-1SG-CONJ *he*-AG *work* *do*-FP-3SG
I went and he worked.

-pa in sentence final position as in (71) would be ungrammatical:

71. *Namba p-e-o baa-me kalai p-i-a-pa.
I *go*-FP-0 *he*-AG *work* *do*-FP-3SG-CONJ

There are a number of suffixes (some of which will be illustrated below) which can mark sentence-medial verbs, depending on the various kinds of co- and sub-ordination. These will be discussed in more detail in the next section.

1.2.2.3 *Tenses and Moods*

In the preceding section we have briefly shown the general characteristics of the so-called sentence-medial and sentence-final verb forms. Thus, all instances of co- and sub-ordination are expressed by sentence-medial forms. There are, furthermore, no modal auxiliaries, such as English *can, must, ought*, etc. All of these are expressed in Enga by sentence-medial forms.

Completive (72), benefactive (73), desiderative (74 and 75), purposive (76 and 77) and interrogative (78) are some of the modalities of Enga:

72. Namba-mé kalái pyó-o etá-te-ly-ó.
I-AG *work do*-0 *finish*-COMP-PRES-1SG
I am completely finished with the work.

73. Namba-mé baa-nyá kalai pya-ka-maí-ly-o.
I-AG *he*-POSS *work do*-BEN-EXCL-PRES-1SG
I am doing his work for him.

74. Baa-mé neé ná-p-u láká lá-o másí-ly-ám-o.
he-AG *food eat*-NP-1SG *LAKA utter*-0 *think*-PRES-3SG-DEC
He wants to eat very badly.

75. Baa-mé náima pú-m-í láká láo másí-ly-á-mo.
he-AG *us go*-NP-2PL *LAKA la*-0 *think*-PRES-3SG-DEC
He wants us to go.

76. Baá kalái pi-n-á lá-o namba-mé yáti méndé sambé-ly-o.
he-AG *work do*-IMP-3SG *utter*-0 *I*-AG *shovel a buy*-PRES-1SG
I am buying a shovel so that he will work.

77. Baa-mé kalái méndé pyá-a-nya yáti sambe-ly-á-mo.
he-AG *work a do*-INF-GEN *shovel buy*-PRES-3SG-DEC
He is buying a shovel in order to work.

78. Láima káka-sa yuú dokó-nyá kate-ngé-pé?[13]
cassowary bush-LOC *land the*-LOC BE-HAB-QU
Are there cassowaries in the rain forest?

Enga also has various modalities dealing with events which have not been observed by the speaker: sensed (79), deductive (80) and historical (81).

79. Kaítí toká lá-l-u-mu.
sky shot utter-PRES-3SG-SENSE
(I sense) it is thundering.

80. Dóko mená lámo.
that pig DEDUC
(I deduce) that is a pig.

81. Baa-mé káka-sa yuú dokó-nyá p-é-á-pyáa.
he-AG *bush*-LOC *land the*-LOC *go*-FP-3SG-HIST
He went into the rain forest.

Enga is an exclusively suffixing language[14]

82. Énda dokó-mé baá kandá-lya-sa-ta-kamai-y-á-pé?
woman the-AG *he see*-UP-CAUS-COMP-BEN-PAST-3SG-QU
Did the woman cause him$_3$ *to look up already for his*$_4$ *benefit?*

except for the negative prefix[15]

83. Akáli dóko ná-p-e-a.
man the NEG-*go*-FP-3SG
The man didn't go.

There are five tenses in Enga; they are illustrated (with the person-number categories) in Table 1.1, using the verb la- *utter, say* as a root.

TABLE 1.1: VERB PARADIGM

	Far Past	Near Past	Past	Present	Future
1sg	l-é-ó	lá-p-ú	lá-l-o	lé-ly-o	lá-t-ó
2sg	l-é-é	lá-p-i	la-l-é-no	le-l-é-no	lá-t-é
3sg	l-é-á	lá-py-á	la-l-á-mo	le-ly-á-mo	lá-t-á
1du	l-e-ámbá	la-p-úmbá	la-l-ambá-no	le-ly-ambá-no	la-t-ámbá
2du	l-e-ámbí	la-p-ímbí	la-l-ambí-no	le-ly-ambí-no	la-t-ámbí
3du	l-e-ámbí	la-p-ímbí	la-l-ambí-no	le-ly-ambí-no	la-t-ámbí
1pl	l-e-ámá	la-p-úmá	la-l-amá-no	le-ly-amá-no	la-t-ámá
2pl	l-e-ámí	la-p-ímí	la-l-amí-no	le-ly-amí-no	la-t-ámí
3pl	l-e-ámí	la-p-ímí	la-l-amí-no	le-ly-amí-no	la-t-ámí

The basic form is verb stem + tense + person-number (+ mood marker, in this instance DEC)

NOTES

1. Tée pingí refers to the pig exchange among the Central Enga (i.e. east of Sirunki, and refers to a death payment among the Western (Laiagam and further west) Enga.

2. Section 1.1 is a paraphrase from Meggitt (1971).

3. The materials include: language learning aids Larson (1967), Hintze (1963a and b), Kelly (n.d.) and Cupit (1970 and 1971); phonological statements Bus (n.d. a and b), Burce (1963) and Hintze (1963a and n.d. b); word lists and dictionaries Budke (1964), Bus (n.d. b), Finney *et al.* (1964), Draper (1954 and n.d. a), Foote (n.d.), and Mechan (1967); and grammatical studies Draper (1954 and n.d. a), Hintze (1962), Smythe (n.d.), Burce (1963), and Bus (n.d. a). One continuing problem has been that of the tonal system: Laycock (n.d.), Hintze (1960 and n.d. b), and Nida (1968) have all worked on the problem which is further complicated by dialectal variation.

4. The features given ([+animate], [+concrete], [+inalienable], etc.) are deliberately not specified as syntactic or semantic features; the problem is not solveable at the present stage.

5. Franklin (1971) has suggested that Proto-Engan used a -K/-NG + vowel suffix to denote inalienable parts (i.e. kinship terms and body parts). This appears in the examples listed for the kinship terms and body parts.

6. The correct form of (44) would use the 0-complementizer (cf. 4.1.4)

a. Baa-mé mená dóko pípuli lá-o p-í-á.
he-AG *pig the magic utter*-0 *hit*-FP-3SG
He killed the pig with magic.

The correct form of (45) likewise would use the purposive form:

b. Baá pípuli lá-ta-la pe-ly-á-mo.
he magic utter-COMP-INF *go*-PRES-3SG-DEC
He is going to work magic.

See also (76 and 77) in the text.

7. This is not strictly true because in (46 and 47) the determiner most likely refers to the object of the colour, rather than to the colour itself. Enga here differs from English in that in English one can have examples like *The blue excited her imagination* or *The red killed him* (because it caused the bull to attack).

8. Capell also classifies Enga as Bi (b) on page 155, but this is obviously a typographical mistake, as on Map 16, Enga is classified as Biii (with the languages of the Western Highlands). Capell's Nera dialect of Enga (1969:142) is not a dialect but a closely related (but mutually unintelligible) language, Nete, on the northern fringes of the Enga-speaking area.

9. For some of the wider genetic connections, see McElhannon and Voorhoeve 1971.

10. Incorporated pronoun objects appear in one Enga verb, *give*:

c. Namba-mé émba mená méndé dí-ly-o.
I-AG *you pig a give*-PRES-1SG
I am giving you a pig.

d. Émba-me nambá mená méndé di-l-í-no.
you-AG *me pig a give*-PRES-2SG-DEC
You are giving me a pig.

e. Baa-mé nambá/émba mená méndé di-ly-á-mo.
he-AG *me /you pig a give*-PRES-3SG-DEC
He is giving me/you a pig.

f. Namba-mé baá mená méndé maí-ly-o.
I-AG *he pig a give*-PRES-1SG
I am giving him a pig.

g. Émba-me baá mená méndé mai-l-í-no.
you-AG *he* *pig* *a* *give*-PRES-2SG-DEC
You are giving him a pig.

h. Baa$_3$-mé baá$_4$ mená méndé mai-ly-á-mo.
he$_3$-AG *he*$_4$ *pig* *a* *give*-PRES-3SG-DEC
He$_3$ *is giving him*$_4$ *a pig.*

i. *Baa-me namba/emba mena mende mai-ly-a-mo.
he-AG *me* */you* *pig* *a* *give*-PRES-3SG-DEC

j. *Namba-me emba mena mende mai-ly-o.
I-AG *you* *pig* *a* *give*-PRES-1SG

k. *Emba-me namba mena mende mai-l-i-no.
you-AG *me* *pig* *a* *give*-PRES-2SG-DEC

l. *Namba-me baa mena mende di-ly-o.
I-AG *he* *pig* *a* *give*-PRES-1SG

m. *Emba-me baa mena mende di-l-i-no.
you-AG *he* *pig* *a* *give*-PRES-2SG-DEC

11. -pi conjoins noun phrases.

12. -pa can be used in a number of senses, such as consecutive action, contemporaneous action, and consequential action.

13. -pe is the question marker.

14. For a list of Enga suffixes see Lang (1973).

15. The negative may also be formed via a full verb base:

n. Namba-mé mása-la náe-nge.
I-AG *know*-INF NEG-HAB
I don't know (it).

In equational clauses, the negative adverb daa is used:

o. Baá akáli méndé daá.
he *man* *a* *not*
He is not a man.

CHAPTER TWO

2.0 THE EXISTENTIAL VERBS

This chapter will deal with the first of the two types of Enga classificatory verbs which will be presented. The EV occurs with nouns and has a meaning which corresponds to that of the English copula, *be*. As noted above (0.1), the EV of Enga corresponds to the Navaho 'neuter' form which denotes "...an object of a particular type in position or at rest...'a mountain lies'" (Hoijer 1945:22); Landar notes that informants

> often translate these verbs as 'it's lying there' or 'it's setting [sic] there'. Hence one might translate tse si? as 'a rock (as a round object) has taken a position', or 'a rock is sitting there', or simply 'there's a rock' (Landar 1965:328).

The chapter will deal firstly with the form of the EV (its syntactic properties), and secondly with the semantics of the EV. We will conclude with a brief discussion of a few theoretical problems arising from attempts to account for the EV in a generative transformational framework.

2.1 *SYNTACTIC PROPERTIES*

The EV (with a few exceptions) occurs with a noun in a one-one relation; that is, every noun co-occurs with a specific EV, and each of the EVs co-occurs only with a certain set of nouns. There are seven EV: kata-, pita-, sa-, pala-, ipa-, lya- and manda-. They are exemplified with typical referents in (1-7). Thus the noun *pig* may occur existentially[1] only with the EV kata-; this co-occurrence marks the noun class (or gender[2]) membership of the noun:

1. Mená dúpa kate-ngé.
   pig the BE-HAB
   Pigs exist; there are pigs.

2. Énda dúpa pete-ngé.
   woman the BE-HAB
   Women exist.

3. Kanopáto dúpa sí-ngi.
   reptile the BE-HAB
   Reptiles exist.

4. Mapú dupa pale-ngé.
   sweet.potato the BE-HAB
   Sweet potatoes exist.

5. Endáki dúpa epe-ngé.
   river the BE-HAB
   Rivers exist.

6. Ambúlyá dúpa lyi-ngí.
   bee the BE-HAB
   Bees exist.

7. Pongó dúpa mande-ngé.
   penis the BE-HAB
   Penises exist.

To combine any of the EVs with a noun different from the one it co-occurs with would make the utterance ungrammatical, as

1a. Mena dupa { *pete-nge / *si-ngi / *pale-nge / *epe-nge / *lyi-ngi / *mande-nge }
    pig the

The EV for a noun class is not usually used in the stative form with nouns of that class, since it (i.e., the EV) is the habitual existential mode of the noun:[3]

8. *Saa piti-pae doko...
   possum BE-STA *the*

9. *Laima kata-pae doko...
   cassowary BE-STA *the*

The inflected EV is, however, obligatory when the referent is located at some place but out-of-sight of the speaker:

10. Koné akáli dóko andá-ka ká-ly-a-pe?
    red man the house-LOC *be*-PRES-3SG-QU
    Is the European man at home? or *Is the European man standing in the house?*

(10) is ambiguous but the first meaning of it is not expressed by (11), only a meaning analogous to the second meaning of (10):

11. Koné akáli dóko andá-ka pí-ly-a-pe?
red man the house-LOC *sit*-PRES-3SG-QU
Is the European man sitting in the house? (but not: *Is the European man at home?*)

(12) exhibits the same kind of ambiguity as (10):

12. Koné énda dóko andá-ka pí-ly-a-pe?
red woman the house-LOC BE-PRES-3SG-QU
Is the European woman at home? or *Is the European woman sitting in the house?*

And similarly (13) is unambiguous in the same sense that (11) is:

13. Koné énda dóko andá-ka ká-ly-a-pe?
red woman the house-LOC *stand*-PRES-3SG-QU
Is the European woman standing in the house? (but not: *Is the European woman at home?*)

In (11) the speaker has strong reasons for presupposing that the man is in fact sitting (not standing, sleeping, or laying, etc.);[4] however in (10) the speaker does not want to know whether the man is sitting, sleeping, etc.--and so he must use the EV which normally co-occurs with akáli *man*.

The EV must appear in the surface forms of modalities such as desiderative (14), and purposive (15).

14. Wáné dóko akáli ká-lya-nya más-í-á.
boy the man BE-INF-GEN *think*-FP-3SG
The boy wanted to be a man.

Note that this would be ungrammatical if used with the wrong EV as in

14a. Wáné dóko akáli { *pí-lya-nya / *má-nja-nya / *sá-la-nya / *lyá-la-nya / *íp-a-nya / *pá-lya-nya } más-í-á.

15. Baa-mé énda pí-lya-nya lá-o máso-o ŋáŋa mande-ly-á-mo.
she-AG *woman* BE-INF-GEN *utter*-0 *think*-0 *baby bear*-PRES-3SG-DEC
In order to be a woman, she is having a baby.

15a. *Baa-me enda ka-lya-nya la-o maso-o ŋaŋa mande-ly-a-mo.

2.2 SEMANTICS

In this section we will discuss

2.2.1 the meaning of the EV
2.2.2 the features of the EV
2.2.3 the semantic redundancy rules
2.2.4 loan items
2.2.5 intersection
2.2.6 change of class

The general relevance of the problems has been discussed above in 0.2.1-0.2.3. Here we will address ourselves to the specific problems that Enga poses in relation to these topics.

2.2.1 Meaning of the EV

The EV has the meaning of the English *be* and *have*; it is used for constructions of existence (16 and 17), for location (18 and 19), for possession (20 and 21) and in constructions such as relative clauses (22) and in modalities (cf. 14 and 15 above).

16. Lítu dúpa lyi-ngí.
mushrooms the BE-HAB
Mushrooms exist; there are mushrooms.

16a.*Liti dupa kate-nge.

17. Endákí dúpa epe-ngé.
rivers the BE-HAB
Rivers exist; there are rivers.

17a.Endaki kate-nge.

18. Saá dúpa káka-sa pete-ngé.
possum the bush-LOC BE-HAB
Possums are in the bush.

18a.*Saa dupa kaka-sa kate-nge.

18b.*Saa dupa kaka-sa.

19. Ítí ayómba kisá kate-ngé.
hair head top BE-HAB
Hair is on heads.

19a.*Iti ayomba kisa pete-nge.

19b.*Iti ayomba kisa.

20. Nambá aputíngi pete-ngé.
I grandmother BE-HAB
My grandmother exists/is alive.

20a.*Namba aputingi kate-nge.

20b.*Namba aputingi.

21. Akáli pitaká móna pale-ngé.
men all heart BE-HAB
Men have hearts.

21a.*Akali pitaka mona lyi-ngi.

21b.*Akali pitaka mona.

22. Akáli nambí-sa ka-ly-á-mo dóko...
man coast-LOC BE-PRES-3SG-DEC *the*
The man who is on the coast...

22a.*Akali nambi-sa pi-ly-a-mo doko...

22b.*Akali nambi-sa doko...

In all of the above examples (16-22) the EV is obligatory in the surface structure; this is in direct contrast to other constructions (of similar meaning) in which the EV must *not* appear in the surface (or is very awkward if it does appear). These constructions are those involving a particular item (i.e., as opposed to a generic noun as in (18) above), and the identity (23), class membership (24) or class inclusion of the item (25); and also those constructions which attribute qualities (26).

23. Dáke mená.
that pig
That is a pig.

23a.?*Dake mena kate-nge.

24. Ánga baá itá méndé.
pandanus it tree a
The pandanus is a tree.

24a.?*Anga baa ita mende kate-nge.

25. Pongéná dúpa néne.
fly the insect
Flies are insects.

25a.?*Pongena dupa nene pete-nge.

26. Baá énda nongo pí-pae méndé.
she woman clumsy do-STA *a*
She is a clumsy woman.

26a.?*Baa enda nongo pi-pae mende pete-nge.[5]

Thus, we must note that in cases involving the predicative use of *be*, the EV is not obligatory in the surface structure. This will be discussed in relation to the positions for the presence or absence of the EV as BE in the deep structure (2.3). And, it should also be noted that those cases in which the EV is obligatory in the surface structure correspond to the existential, locative and possessive constructions as described by Lyons (1967, 1968). Lyons's hypothesis is that both the existential and possessive derive from locatives ("...in many, and perhaps in all, languages existential and possessive constructions derive (both synchronically and diachronically) from locatives" (1968:390)). Lyons notes two additional points, firstly that

> existential sentences typically have an indefinite, rather than a definite, subject: this fact raises the possibility that they should be treated, in a syntactic analysis of their deep structure, as indefinite locatives (with 'locative', in this context, being understood to include 'temporal'...(1968:390).

Lyons secondly points out that this connection is supported

> by the employment of what was originally a locative...adverb in the existential sentences of a number of European languages: cf. English 'there (in 'there is/are...),...German 'da' (in 'ist da', 'is there' or 'exists': cf. 'das Dasein', 'existence', i.e. 'the being-there') (1968:390).

Additional support for Lyons' first point has recently been presented by Hetzron with evidence for Hungarian that the copula is generated for all definite nouns (and not generated for indefinite nouns and noun phrases).[6]

Regarding Lyons' second point (the locative[7] adverb 'there'), Laiapo Enga offers two verbs of interest: ae- and dae-. The formation of ae- is most likely from the locative adverb aé *here* used as the verb base plus the tense, and person-number suffixes:

27. Méndé ae-ly-á-mo.
a here-PRES-3SG-DEC
There is some (here).

and

28. Méndé dae-ly-á-mo.
a not-here-PRES-3SG-DEC
There is not any (here).

The dae- is most likely from the negative adverb daá *not* plus the locative adverb aé *here*, plus the verbal suffix(es).[8] It must be noted that these two verbs, aénge and daénge are not EV, since they do not indicate existence:

> The philosophical importance of this distinction lies in the fact that most modern philosophers would say that existence cannot be predicated of objects in the same sense as their various attributes, or properties, but is presupposed in the identification of objects or in any reference to them (Lyons 1968:388).

2.2.2 Features

The EV chosen depends on the habitual (i.e. existential) posture or shape of the referent as perceived by the Enga. Informants never hesitate in assigning a noun to a particular EV class, and native speakers do not seem to have to learn the class of each noun individually; instead, they seem to operate with a certain set of principles. This ability indicates that the assignment of the EV to nouns is non-arbitrary and made in accordance with some set of rules which each speaker of the language has acquired. Moreover, loan items are readily assigned to the same EV classes (i.e., +pusíi *cat* is assigned to the class of nouns which co-occur with petengé) by different speakers with consistency. If questioned, unsophisticated informants will give the following criteria by which they assign EVs to noun classes:[9]

1. Katengé will be elicited for referents judged to be tall, large, strong, powerful (potentially harmful), standing or supporting; some typical referents are: akáli[10] *men*, ándá *house*, íta *tree*, níki *sun*, mókó *leg*.

2. Petengé will be elicited for referents judged to be small, squat, horizontal, weak; some typical referents are: énda[11] *woman*, saá *possum, game mammal*, néne *Arthropoda, insects*, peté *pond*.

3. Lyingí will be elicited for referents which are hanging, or excressing outside another object; some typical referents are: ambúlyá *wasp, bee*, kamalúmbi *moss*, líti *mushroom*, dií *fruit, seeds, flower*.

4. Palengé will be elicited for referents which are internal or subterranean; some typical referents are: ímú *worm*, móna *heart*, pungí *liver*, mapú *sweet potato*.

5. Epengé will be elicited for referents which are intermittent, capable of growth, or liquid/gas; some typical referents are: endáki *river*, aiyúu *rain*, íti *hair, fur, feathers*, taiyóko *blood*, kénde *vine used for rope*.

6. Síngi will be used for referents which are orifices, locations, or motionless, crawling or aquatic; some typical referents are: wapáká *eels*, káita *door, path*, yuú *ground, land*, yáti *shovel, spade*, néngekaita *mouth*.

7. Mandengé will be used for referents that are reproductive, such as: pongó *penis*, kambáke *vagina*, ípi *testicles*.

Thus it seems that native speakers assign EVs to nouns according to certain distinguishing features of the noun. Rules for the assignment of the EVs can be represented by plus and minus features in the tree diagram (2.1) and these are represented more formally in 2.2.3. Informally, the features of the EV assignment are listed below:

1. Katengé [+heavenly, +construction, parts, +large/powerful, +harmful...]
2. Petengé [+still water, +sores...]
3. Lyingí [+seed, fruit, +excrescent, +swarm...]
4. Palengé [+subterranean, +internal...]
5. Epengé [+intermittent, +liquid/gas, +growing, +vine...]
6. Síngi [+orifice, +location, +aquatic, +crawling...]
7. Mandengé [+reproductive...]

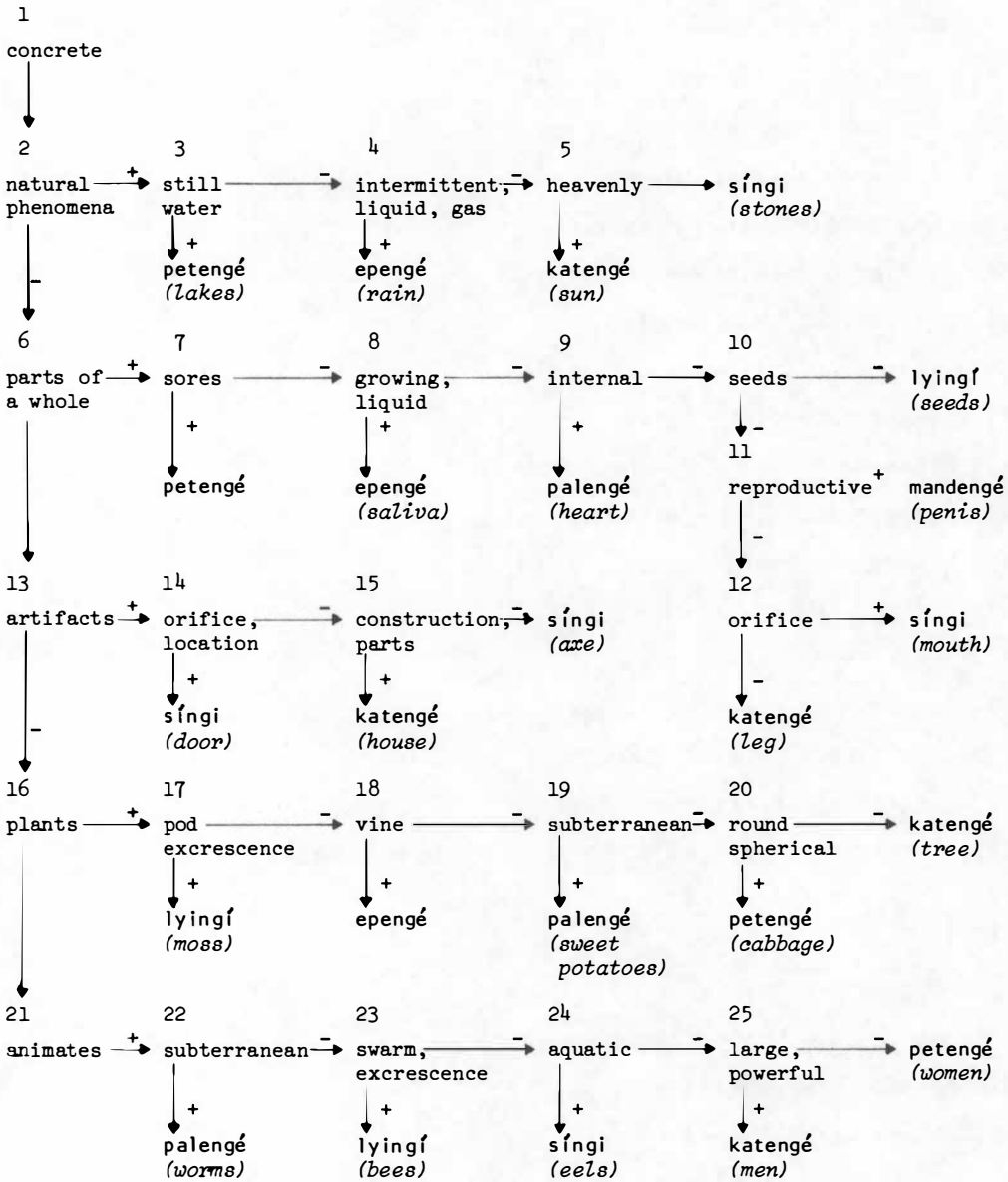
The most frequently used feature is that of place of existence (or habitat): [+subterranean] will elicit only palengé, [+heavenly] will elicit only katengé, and [+aquatic] will elicit only síngi. Thus, we do find at least one general feature which is realized by mutually exclusive EV.

2.2.3 Redundancy Rules

The rules presented in Diagram 2.1 are here presented as an ordered set. The ordering is such that between two rules the one with broader scope is to have prior application (in order to prevent individual enumeration of features if it were instead applied later).

1. [+concrete] → [±natural phenomena]
2. [+natural phenomena] → [±still water]
3. [+still water] → petengé.
4. [-still water] → [±intermittent/liquid/gas]
5. [+intermittent/liquid/gas] → epengé.
6. [-intermittent/liquid/gas] → [±heavenly]

DIAGRAM 2.1: THE EXISTENTIAL VERBS



7. [+heavenly] → katengé.
8. [-heavenly] → síngi.
9. [-natural phenomena] → [±parts of a whole]
10. [+parts of a whole] → [±sores]
11. [+sores] → petengé.
12. [-sores] → [±liquid/growing]
13. [+liquid/growing] → epengé.
14. [-liquid/growing] → [±internal]
15. [+internal] → palengé.
16. [-internal] → [±seeds/fruit]
17. [+seeds/fruit] → lyingí.
18. [-seeds/fruit] → [±reproductive]
19. [+reproductive] → mandengé.
20. [-reproductive] → [±orifice]
21. [+orifice] → síngi.
22. [-orifice] → katengé.
23. [-parts of a whole] → [±artifact]
24. [+artifact] → [±orifice/location]
25. [+orifice/location] → síngi.
26. [-orifice/location] → [±construction and parts]
27. [+construction and parts] → katengé.
28. [-construction and parts] → síngi.
29. [-artifacts] → [±plant]
30. [+plant] → [±pod/excrescence]
31. [+pod/excrescence] → lyingí.
32. [-pod/excrescence] → [±vine]
33. [+vine] → epengé.
34. [-vine] → [±subterranean]
35. [+subterranean] → palengé.
36. [-subterranean] → [±spherical]
37. [+spherical] → síngi.

38. [-spherical] → katengé.

39. [-plant] → [+animate]

40. [+animate] → [±subterranean]

41. [+subterranean] → palengé.

42. [-subterranean] → [±excrescence/swarm]

43. [+excresence/swarm] → lyingí.

44. [-excresence/swarm] → [±aquatic/crawling]

45. [+aquatic/crawling] → síngi.

46. [-aquatic/crawling] → [±large/harmful]

47. [+large/harmful] → katengé.

48. [-large/harmful] → petenge.

In the ordering of the EV rules (Diagram 2.1), following general usage, more specific items were ordered first, with more general items following. This accounts for the ordering of the nodes 3,7, 22, and 17 (most others too), and the ordering of the most frequently used EV to the far branches of the diagram: nodes 5,12,15,20, and 25. Some specific explanations for the ordering follow.

In the domain of artifacts (node 13 and ff.), síngi appears twice. The first node, 14, must apply before 15, or otherwise the various house and construction parts would be given incorrectly. Likewise, the constructions of 15 must be applied before we can terminate with the 'everything else' taking síngi.

In the domain of parts, node 11 must be applied before 12, or the kambáke *vagina*, which is in fact considered to be [+orifice] and said by informants to be the wánekaita *child's doorway*, would be incorrectly assigned síngi. Informants were definite in the rejection of the assignment of kambáke to the síngi class: it must have mandengé. Also in the domain of parts, node 10 must precede node 11, or díí *fruit, seeds* would be assigned mandengé. This is a particularly interesting case, since díí, although usually assigned lyingí, can also be used with mandengé. This particular case, díí, is further discussed in 2.2.5.

In the domain of animates, node 25 makes an arbitrary decision between katengé and petengé: both are equally frequent, and a reversal of the features (i.e. to change the node to [-large, -powerful, -harmful] or to [+small...]) could be made.

2.2.4 Loan Items

The correct assignment of loan items to particular classes in any class system can be accounted for such that the assignment is based on the similarity of the loan item to other (already classed) items of the system.[12] The features focused upon in the assignment are clearly those chosen by the culture, i.e., those regarded by the culture as traditionally important. Wild raspberries grow throughout Enga-land and are regarded as children's food; the introduction of blackberry bushes and their equation with wild raspberries results in the classification of the blackberries as children's food.

Table 2.2 presents some of the loan items.

TABLE 2.2: LOAN ITEMS[13]

Animates:	Gloss	EV
bulumakáo	*cow*	katengé
pusíi	*cat*	petengé
Plants:		
samúu	*potato*	palengé
katósa	*carrots*	palengé
kapúsa	*cabbage*	síngi/petengé
letésa	*lettuce*	síngi/petengé
painapóló	*pineapple*	síngi/katengé
kalípu	*peanuts*	katengé
kanápu	*corn*	katengé
bíni	*bean*	lyingí
Artifacts:		
ínja	*hinge*	katengé
lóko	*lock*	katengé
dóa	*door*	síngi
kolósá	*clothes*	síngi
bakésa	*bucket*	síngi
gumíi	*rubber*	síngi
lésa	*razor*	síngi

(all other introduced artifacts also take síngi)

Referring to Diagram 2.1, most of the loan items' assignment is determined correctly by the rules given there. The cow, [+large...] is assigned katengé, the cat [+small...] is assigned petengé. The

plants also, with the subterranean ones being assigned palengé, the tall upright ones being assigned katengé, and the round/spherical ones assigned síngi. In the case of the bean, the focus is on the díí (i.e., pod, the edible portion) and lyingí is assigned. The cases of lettuce and pineapple are discussed in 2.2.5 as intersecting items. Except for the hinge and lock, all the artifacts are assigned síngi. It seems likely that the hinge and lock are regarded as parts of the house, and this feature causes them to be assigned katengé (rather than síngi). Most of the introduced loan items occur in the semantic domain of artifacts.

Thus, as we postulated above, the assignment of loan items to the correct EV classes is based upon Enga-adjudged similarity of features of the loan item in relation to items already present in the Enga EV class system.

2.2.5 Intersection

Intersection is a feature of classification systems in general (cf. 0.2.3.2); in the entire corpus of approximately 3,000 Enga nouns, fewer than one per cent are involved in cases of EV intersection. Two points must be noted:

i. The options involved in intersection are not in free variation: in German, Butter may use die in north Germany, and der in the south, but das is excluded.

ii. As Landar says about Navaho gender, "rules are broken according to rules for breaking rules" (1965:329).

In the cases presented here involving EV intersection, we will see that the apparent intersection of EVs is usually explained in terms of focus on different EV features of items which are in some way ambiguous. Table 2.3 presents the possibility of twenty-six intersections in the EV (since there are seven EV); of these possibilities, only seven (the capitalized and underlined ones) actually occur.

TABLE 2.3: INTERSECTION IN THE EV

	katengé	petengé	síngi	palengé	lyingí	mandengé	epengé
katengé	k	k/pt	S/K	k/pl	k/ly	K/MD	k/e
petengé		pt	PT/S	pt/pl	pt/ly	pt/md	pt/e
síngi			s	S/PL	s/ly	s/md	S/E
palengé				pl	pl/ly	pl/md	pl/e
lyingí					ly	LY/MD	LY/E
mandengé						md	md/e
epengé							e

The actual data which occur in EV intersections are presented in Table 2.4 below.

TABLE 2.4: INTERSECTION - DATA

k/s alyóngo *bean*, painapóló *pineapple*
k/md pongó *penis*, kambáke *vagina*
pt/s +kapúsa *cabbage*, nómbe *snail*, yáka baná *water birds*, letésa *lettuce*
s/pl imú *worm*, amé *fat*
s/e endákí *river*
ly/md dií *seed, fruit, flower*
ly/e kamalúmbi *moss*

Of the seven occurring two-way intersections (with thus a possible fourteen occurrences for any one EV), the most frequently used EV in the intersection is síngi, indicating that síngi is most likely the most neuter or semantically unmarked of the seven EV. The other occurrences are with two each, katengé, mandengé, lyingí and epengé; with only one occurrence, palengé and petengé. Also notable is that those with only one intersection (palengé and petengé) intersect with the semantically most neutral, síngi. Thus it would also be expected that palengé and petengé would be the most marked (i.e., in comparison with síngi).

Following is a brief discussion of the actual data items involved in the intersections of EV, with some thoughts as to what features permit the intersections. Kamalúmbi *moss* would be a difficult item

in any case, since it is also the only example of a three-way intersection: a few informants stated that kamalúmbi could also be used with katengé (i.e., as well as epengé and lyingí).[14] Comparing the features of Diagram 2.1, it is possible that this intersection can be explained in terms of focus on different features of the moss: in the sense that it is an excrescence on the trees, it is assigned lyingí; in the sense that it has tendrils and is entwined (like a vine), it is assigned epengé.

The intersection of lyingí and mandengé with respect to dií allows the assignment of an additional feature to these two EV. In the case of all parts of a whole, mandengé can be used for animates and plants (as in this case, dií), but lyingí cannot be used for animates. Thus giving to lyingí the feature of [-animate].

In the case of endáki *river*, a clue to the intersection of the two EV (síngi and epengé) occurs at nodes 3 and 4 of 2.1. There it is evident that flowing water, liquids, etc. are assigned to epengé, with still water (lakes, ponds, puddles, etc.) assigned to síngi. In the case of this intersection, it would therefore be postulated that different states of the water are referred to by the two different EV.[15]

Ímú *worm*, and amé *fat* as intersecting with the EV síngi and palengé were explained by an informant: when the referent is internal (and not visible), the EV assigned is palengé; when the referent is external (as the worm uncovered in composting, or the exposed fat at a pig feast), the EV assigned is síngi. Síngi is of course also the EV for crawling animates, which the externally exposed worm would be.

The intersection of petengé and síngi is of especial interest, since it is the only case of petengé as the EV for a plant: kapúsa *cabbage* and letésa *lettuce*. The other two cases are quickly explained: the water fowls are [+aquatic] and thus síngi, but when seen flying, roosting, etc., may possibly be judged with all other birds, as petengé. The snail is a border-line animate, in that perceived as crawling it would be assigned síngi, but perceived as a small insect, etc., would give the assignment petengé. The cabbage is of interest, since a conflict must be perceived by the Enga: if the cabbage is low, round, mainly squat, it should be assigned (as generally it is) to the petengé class--yet petengé is not used for any other plants. The conflict is resolved instead by assigning it to the síngi class (i.e. the semantically most neuter of the classes) which is also the class of native green leafy cultigens.

The reason for the intersection of mandengé and katengé, which occurs with two items, pongó *penis* and kambáke *vagina*, is difficult to determine. Mandengé occurs only as an EV with reproductive parts (seeds, sprouts, fruit stems, etc.), while katengé is used for most external body and plant parts (appendages, leaves, etc.). The intersection might possibly be explained if we consider that the items are viewed first reproductively, and then as ordinary external body parts (i.e., and thus assigned katengé).

The final case of intersection between katengé and síngi is for pineapple. For this we can see that the initial assignment is with leafy cultigens as síngi, and the intersection later with the grown plant (if viewed as tall, upright, etc.) assigned katengé.

Thus it may be seen that in all cases, intersection of EV is attributable to focus on different EV features, especially when these reflect a different existential state (as still versus flowing water, subterranean and terranean worms, etc.). However, this focusing on a variety of different features takes place in only one per cent of all nouns, underlining the overwhelming regularity of the remaining 99 per cent.

2.2.6 Change of Classes

Any system of noun classification must be prepared to delimit the conditions under which the nouns may change classes (cf. 0.2.3.3). In Enga, where the basic features are posture and over-all shape,[16] it would be expected that a referent which changes posture or shape would therefore change its class and require a different (surface) EV. Furthermore, since the (surface) EV marks the habitual state of existence for the referent, a different EV could be expected to signal a basic change of existence, or possibly an altered state of existence for that referent. This can be seen from the following example:

The EV assigned to ĺtá *tree* is katengé, based on the trees' features of being tall, upright, large, etc. (29). When the tree is felled, the referent ĺtá is realized with the EV síngi (30), and when the felled tree is further chopped into logs and piled in a wood pile, the referent is realized with the EV palengé (31).

29. ĺtá dúpa kate-ngé.
tree the BE-HAB
Trees exist.

30. ĺtá (poká-pae) sí-nge.
tree cut-STA BE-HAB
Felled wood/trees exist.

31. ítá (tamó-pae) pale-ngé.
tree rotten-STA BE-HAB
Rotten wood exists.

In each case the stative form (in parentheses) signals that a different referent ítá is involved, and thus that a different EV is required.[17] Following are non-permitted examples:

30a.*Ita poka-pae kate-nge.
tree cut-STA BE-HAB
Felled wood/trees exist.

31a.*Ita toka-pae kate-nge.
tree chop-STA BE-HAB
Chopped wood exists.

If the stative form is optionally deleted, it is recoverable from the EV present in the surface structure:

32. ítá pale-ngé.[18]
tree BE-HAB
Felled wood/trees exist.

In (30) the referent can only be felled trees or wood (ítá pokápae), not chopped wood or a living tree:

32a.*Ita poka-pae kate-nge/si-ngi/etc.
tree cut-STA BE-HAB /BE-HAB

However, if the EV is deleted, and no stative form is present, the EV which would be recoverable would only be that for the generic ítá

33. ítá kate-ngé.
tree BE-HAB
Trees exist.

and not that for a felled tree or chopped wood. (34) is a further example for humans and change of existential state, with a male referent

34. Baá ánjá kate-ngé-pé?
he where BE-HAB-QU
Where is he?

In the sequence (35-36), (36) must show the change of state announced in (35)

35. Mulitáka yuú dokó-nyá akáli méndé kum-é-á.
Mulitaka land the-LOC *man a die*-FP-3SG
A man has died at Mulitaka.

36. **Baá ánjá sí-ngi-pi?**
he where BE-HAB-QU
Where is he? (i.e., the body)

The change of existential state (from living to dead) is clearly reflected in the EV assignment and the change of class of the noun's referent. That it is the existential state (and not a matter of size, etc.) is exemplified by (37) and (38)

37. **Íta muú dúpa kate-ngé.**
tree short the BE-HAB
Short trees exist.

38. **Saá andáke dúpa pete-ngé.**
possum large the BE-HAB
Large possums exist.

Thus individual variabilities, such as tallness, largeness, stupidity, etc., do not affect the EV assignment of these individuals, who are assigned to the generic EV (as culturally regarded by the Enga: i.e., **saá** *game mammals* are basically small, but large individual **saá** may exist still using the EV of the generic (small) **saá**). On the other hand, change of existential states, such as living, dying, being felled, rotting, etc., do affect the EV assignment of individuals, causing the referent affected or experiencing the change to change its EV class.

In a system like Enga, where the features are based on existence, it would, of course, be expected that a change of existence would be signalled by a change of class; in much the same way as English pronominal reference, based on a natural gender system, can use a 'gelding' rule to predict the assignment of *it* rather than *he* to a steer.

2.3 *CONCLUSION*

The Enga EV has been described above (2.0 to 2.2); we will now attempt to account for it within the generative transformational framework. Firstly, we will briefly discuss the transformational introduction of BE (the EV). The fact that the EV is uniquely recoverable from its co-occurring noun (cf. 2.1, 2.2, and examples 29 to 33), and is often omitted in the surface structure (2.2.1 above) leads us to assume that the EV is determined by the features of the noun. The features (2.2.2) and the rules assigning the EV to nouns (2.2.3) have been discussed above. Following Bach (1967) we have assumed that the EV is introduced transformationally, since this

accounts with more elegant simplicity for the facts (than postulating the existence of BE in the deep structure, and its subsequent deletion as necessary).[19]

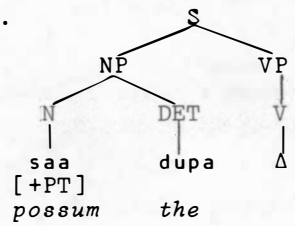
A non-native speaker who does not know the features which assign EV to the noun classes cannot successfully recover the deleted EV from the surface structure. A fairly common mistake among Enga learners is the incorrect assignment of a deleted EV in a sentence (which of course results in an ungrammatical sentence, and a correction by the Enga speakers).[20] Assuming (as we have), that the features of the noun determine which particular one of the seven EV is to co-occur with a given noun allows us to account for cases of intersection (i.e., overlapping of features), change of class (i.e., by substitution of features), and assignment of loan items to the appropriate EV class. The question then remains, by what mechanism(s) do the noun features allow for the introduction of the EV?

We propose that the EV is optionally introduced by the noun's features, using a convention of 'feature spreading'. Feature spreading has been proposed by Givón (1969, 1970), Mould (1971) and Voeltz (1971 (1971) to account for gender conflict resolution in Bantu, Luganda, and Xhosa. Feature spreading in Enga would operate as follows. When the EV is necessary in the surface structure, it would be transformationally introduced at a dummy V node.[21] The features of the noun determine which of the seven EV will appear in the surface (in diagrams to follow, these features will be abbreviated to the first letter of the co-occurring EV), and the feature spreading rule duplicates the features on the dominating NP node. A rule of grammatical agreement then copies the features of the dominating NP node onto the predicate node. Thus we would have

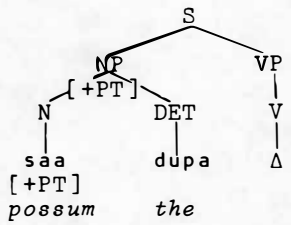
39. **Saá dúpa pete-ngé.**
possums the BE-HAB
Possums exist.

The feature spreading surface realization of **petengé** is accomplished in (39a and b):[22]

39a.

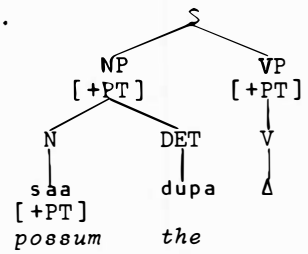


39b.

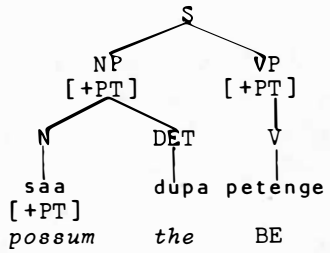


In (39a) we have a convention 'feature spreading' which copies the EV features to the dominating NP (39b). In (39c) an agreement rule copies the EV feature of the dominating NP into the predication, where the lexicon permits insertion of the appropriate EV, in the case of (39), petengé.

39c.



39d.



In Enga, as in English, we may have sentences like (40-42)

40. Mená dúpa kate-ngé.
pig the BE-HAB
Pigs exist.

41. Saá dúpa pete-ngé.
possums the BE-HAB
Possums exist.

42. Kanopato dupa si-ngi.
snakes the BE-HAB
Snakes exist.

In English such sentences may be conjoined to yield (43):

43. *Pigs, possums and snakes exist.*

However, since in Enga the EV would be manifested in the three different surface forms of (40-42), no surface equivalent to English (43) exists. (44a-c) would be ungrammatical.[23]

44. Mena-pi saa-pi kanopato-pi dupa
pig-CONJ *possum*-CONJ *snake*-CONJ *the*

(a) *kate-nge.
(b) *pete-nge.
(c) *si-ngi.
BE-HAB

Nor is a sentence like (45) possible.

45. *Mena-pi saa-pi kanopato-pi dupa kate-nge-pi pete-nge-pi
pig-CONJ *possum*-CONJ *snake*-CONJ *the* BE-HAB-CONJ BE-HAB-CONJ
si-ngi-pi.
BE-HAB-CONJ

Instead Enga attaches the conjunctive suffix -pi to the verb of each of (40-42), thus producing (46).

46. **Mená dúpa kate-nge-pí saá dúpa pete-nge-pí kanopáto dúpa si-ngi-pi.**[24]
pig the BE-HAB-CONJ *possum the* BE-HAB-CONJ *snake the* BE-HAB-CONJ
Pigs, possums and snakes exist.

In conclusion, we have accounted for the assignment of the correct co-occurring EV to its nouns, based on the introduction of a dummy V node, to which the noun spreads the feature bundle, and a rule which transfers the noun's feature complex into the surface EV position, where it would be realized phonologically as the appropriate EV. In the EV this process is optional; as we will see later (4.3), feature spreading is obligatory in the predications.[25]

NOTES

1. The phrase 'occur existentially' is illustrated syntactically in the following examples (10-15), and semantically in (16-26).

2. The terms 'gender' and 'noun class' both refer to the same phenomena, i.e. "classes of nouns which are reflected in the behaviour of associated words" (Hockett 1958:231). Since in Indo-European the 'natural' connotation of 'sex' is the only criterion determining a gender system, some have preferred to use 'noun classes' (Dixon 1968: 105), (Capell 1969), *et al.* The Americans have taken the other view, and include any and all relevant features in their 'gender' systems: "sex, animateness, size, shape, degree of abstraction, and the like..." (Hockett 1958:231).

3. The stative form is composed of the verb base plus the completive suffix, plus the stative marker; thus the 'full' form for (8) would be pitĺ-pa-e. The stative form is of interest mainly because certain noun classes occur only with a co-occurring stative form of a predication: cf. 1.2.1, the colour words. There are two exceptions, i.e., nouns which may co-occur with their EV in the stative form:

a. Akáli katá-pae...
   man be-STA

b. Énda pitĺ-pae...
   woman BE-STA

Both of these have the meaning of a person who remains in the clan territory: a man who does not live with his mother's or wife's relatives, and a woman who does not marry. I have only these two from my data and am not entirely sure if

c. ?*Saá pitĺ-pae...
   possum BE-STA

would be acceptable. In the case of a tree kangaroo kept as a pet (i.e. and confined to a particular tree), it might well be possible.

4. (11 and (13) are, of course, non-classificatory verbs. See 0.1. Occurring parallel to the EV in Enga are corresponding non-classificatory verbs:

d. Baá kate-ly-á-mo.
he/she/it stand-PRES-3SG-DEC
He/she/it is standing.

e. Baá pi-ly-á-mo.
he/she/it sit-PRES-3SG-DEC
He/she/it is sitting.

f. Baá si-ly-á-mo.
he/she/it lay-PRES-3SG-DEC
He/she/it is laying.

g. Baá pale-ly-á-mo.
he/she/it lay.inside
He/she/it is laying inside.

h. Baá lyi-ly-á-mo.
he/she/it hang-PRES-3SG-DEC
He/she/it is hanging.

i. Baá mande-ly-á-mo.
he/she/it carry-PRES-3SG-DEC
He/she/it is carrying (it).

j. Baá epe-ly-á-mo.
he/she/it come-PRES-3SG-DEC
He/she/it is coming.

However, it must be stressed that the EV have only the single meaning *be*, with seven different surface manifestations; the deep structure is the same. This corresponds to the pro-verbs of the predications, see Notes 13 and 14 of that chapter.

5. "Karam seems to be the same in that the existence of a thing is indicated by use of the verb md- to exist, while equations or assertions of identity (*is a*) are made *without* a verb, e.g.

k. kaj ok
pig that
That is a pig.

vs.

1. kaj mdp
pig it.exists
Pigs exist; there are pigs; pigs are there.

(A. Pawley, personal communication.)

6. Cf. Hetzron (1970) for additional information.

7. Also in connection with Lyons' idea that existentials and possessives may derive from indefinite locatives, consider the EV of location, sa-, from which derives most likely the locative case of Enga: ee-sá *garden*-LOC, ténge-sa *near*-LOC, etc. Note also the possible formation of the possessive (-nya) from the non-classificatory verb nya- *get, take.*

8. Since these two (aénge and daénge) occur in the Laiapo dialect of Enga, it was not possible to do substantial work on them while living among the Kopetesa Enga. Nonetheless, it seems that these are used only with inanimate subjects; additional work is needed.

9. See Appendix C for additional data on the Enga EV. The entire corpus (approximately 3,000 nouns) is not presented, but instead only the generic items.

10. Men are assigned katengé because they are "active, usually standing, fighting or chopping trees" (informant Frank Iki's statement).

11. Women are assigned petengé because they "like to sit, and are usually sitting minding the children and infants, cooking, or planting in the garden" (informant Frank Iki).

12. The means whereby similarity and difference between loan items and native items are adjudged constitutes the major problem here; i.e., which of all possible features are chosen? Cf. Lyons' statement on semantic features, 0.2.1 above.

13. Since all of the data presented are loan items, the "+" markers are omitted in the Table.

14. I am doubtful of informants' statements that katengé can be used with moss; I suspect that the informants who so assigned it were

referring not to the existential state of moss, but its function as a wig adornment.

15. A. Pawley mentions (personal communication) that the EV are "sometimes semantically contrastive, contributing information about the form or appearance of the subject noun". It must be pointed out that this is only true of the surface, as in the deep structure two different concepts/states exist.

16. Posture and shape are the most general features filtered from the informal informants' statements, but do not appear overtly in Chart 2.1.

17. One problem which might be involved here for the lexicographer is that of homonymy versus polysemy. I have opted for homonymy. Dr. C. L. Voorhoeve comments that all the ĺtá in examples (30-31) are, in some sense, *wood* in a particular state of existence, which is uniquely determinable from the EV in the surface structure, and that there is thus no need to posit homonymy.

18. R. Lang has pointed out that the crucial case is

m. *ĺtá toká-pae dúpa ĺsa pale-ngé.
tree chop-STA *the down* BE-HAB
Chopped wood exists.

19. Since the EV is not present in the surface structure in the majority of cases, the transformational introduction is more economical; the other possibility would be to postulate the presence of BE in the deep structure for every [+concrete] noun with obligatory deletion in most environments.

20. Luzbetak, for Middle Wahgi, has stated:

> A non-native speaker often finds it difficult to decide whether he should in a given case say mem, tem or pam. All three verbs mean more or less the same, *sc., he, she, it is.* However, the three words may not be used indiscriminately (Luzbetak 1954:159).

21. We will not go into the conditions under which the transformational introduction of the copula would occur here.

22. In the examples to follow, the root is introduced with the habitual in order to simplify the diagrams, so that the rules to be

illustrated will not be obscured by complications unnecessary to their illustration.

23. In Lang (1971), sentences like (44a-c) were believed to be grammatical. Additional informant work has shown this to be an erroneous belief. From work with informants, it seems that Enga is similar in this respect to German and those languages in which gender conflict is not resolved by shortcuts as in the African languages (see Givon and Voeltz), but where instead each gender has to appear in the surface structure, i.e. in German we must say

g. Liebe Frau Jochims, lieber Herr Jochims

marking the different genders; (f) and (g) are both ungrammatical

h. *Liebe Frau und Herr Jochims

i. *Lieber Frau und Herr Jochims.

24. Sentences like (46) are, however, more like possible rather than actually occurring sentences, unless the Enga find themselves in conversation with an ethnographer-linguist specifically interested in existence.

25. I very much appreciated the comments and discussion from Professor George Grace's reading of a much earlier draft of this chapter; they have substantially contributed to the present version.

CHAPTER THREE

3.0 THE ANIMATE NOUNS

The major focus of the present study is upon the Enga classificatory verbs and the features of the co-occurring nouns which determine the surface representation of the verbs. In the preceding chapter on the EV we have described some of the features of the referents which determine the EV assignment. Since the EV co-occur with concrete nouns,[1] the present chapter will describe the semantic features of one sub-set of Enga nouns, the animates.[2] The description of the semantic features of the animate nouns also allows us to compare and contrast the features of this sub-set of concrete nouns and those given for the EV in 2.2.2).

In this chapter we will discuss

3.1 Semantic Features
3.2 Semantic Redundancy Rules
3.3 Loan Items
3.4 Change of Class
3.5 Comparison of the Semantic Features of Enga Animate Nouns with those of the EV

The nouns chosen are not a complete listing of the Enga animate nouns, but are certainly representative of the primary taxa[3] of this semantic domain. Especial note should be made that all of the items listed (both in Table 2.1 and Diagram 2.2) are considered by the Enga to be animate, i.e., ghosts, demons, fire and water, the sun, moon, stars, and the sky people are all [+animate] to the Enga. The items to be investigated are presented in Table 3.1 below.[4]

TABLE 3.1

1	nikí	*sun*
2	kaná	*moon*
3	búi	*stars*
4	yályakali	*sky people*
5	itáte	*fire*
6	endáki	*water, river/stream*
7	ímú	*worm, maggot*
8	néne	*insects, Arthropoda*
9	wapáká	*eels*
10	mónge	*frogs, toads*
11	kanopáto	*reptiles*
12	yáka	*birds*
13	saá	*game mammals*[5]
14	yúi	*(domestic) rodents*
15	mená	*pig*
16	yána	*dog*
17	tindío	*bats*
18	láima	*cassowary*[6]
19	putútuli	*demons*
20	yuú endángi	*pond woman*
21	timángo	*ghosts*
22	endakáli	*humans, people*

3.1 *SEMANTIC FEATURES*

Semantic features of the animates are of two types, overt and covert. The overt features are presented in Diagram 3.2 and form the basis of the semantic redundancy rules to be discussed in 3.2 following. The overt features will be briefly discussed in 3.1.1 and the covert features will be discussed in 3.1.2.

3.1.1 Overt Features

In Enga we find two major kinds of overt features:

(i) morphological features, and

(ii) habitat features.

The morphological features are *leafy, eyed, bony, winged* and *eared.* Features of habitat are *heavenly, stone dwelling, subterranean, forest dwelling, aquatic* and *pond dwelling.*[7] There are also various other features which include *capable of dying, volition, intelligence, human-like, domesticated, carnivore,* and *originating people.*

DIAGRAM 3.2: THE ENGA ANIMATES

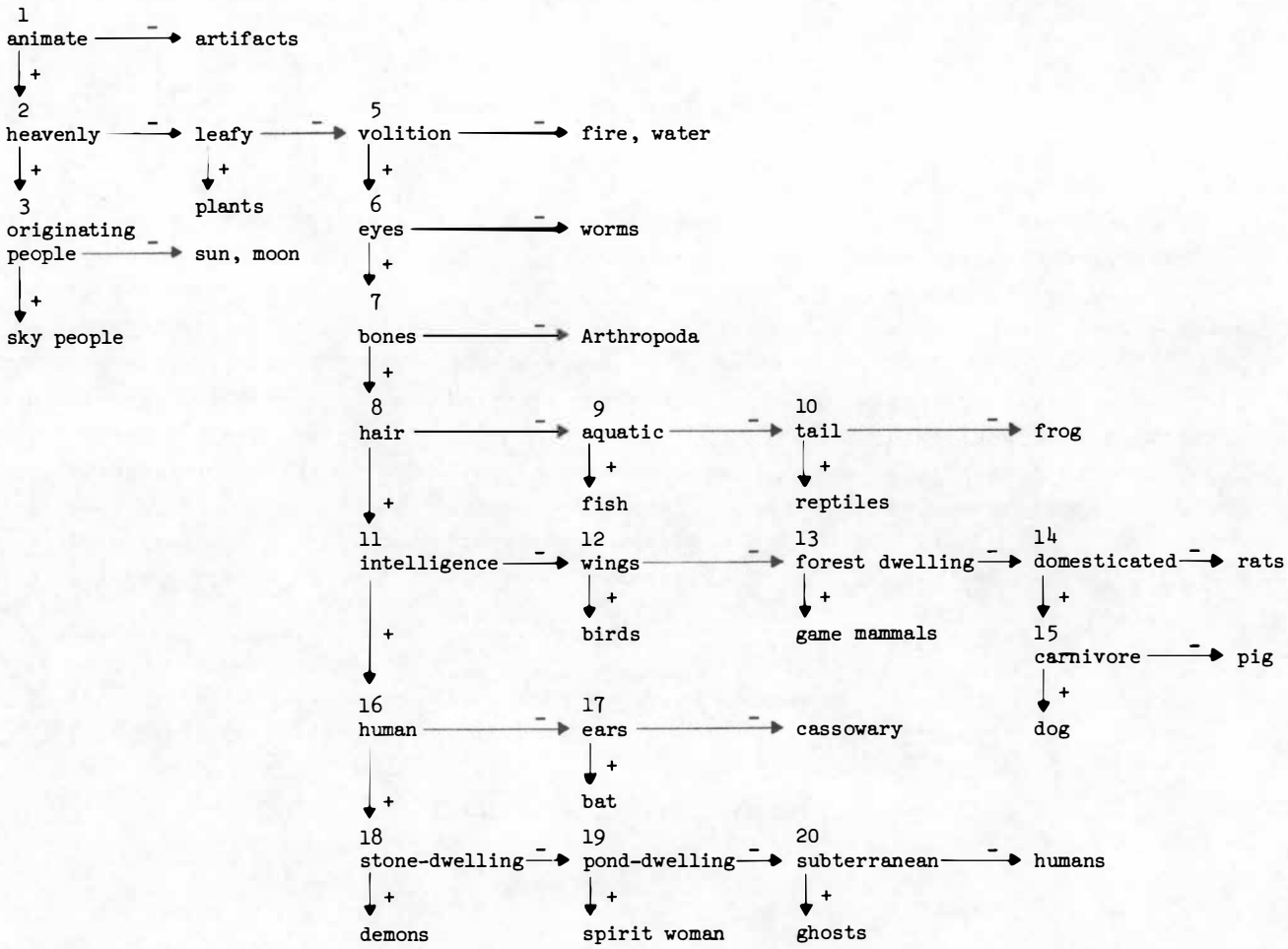


CHART 3.3: COVERT FEATURES[8]

	Item (English gloss)	'Brothers'	'Parents'
1	yúi *(domestic rodents)*	póko *(non-domestic rodents)*, saá *(game mammals)*	
2	saá *(game mammals)*	yúi *(rodents)*, tindĺo *(bats)*	tekéa *(echidna)*, komáipu *(tree kangaroo)*
3	tindĺo *(bats)*	saá *(game mammals)*	déké *(very large bat)*
4	yána *(dog)*	pendé *(wild dog)*	
5	mená *(pig)*	kápuá *(wild pigs)*	bulumakáo *(cow)*
6	endakáli *(humans)*	kéwá *(wild cannibals)*	nikĺ *(sun)*, kaná *(moon)*[9]
7	yályakali *(sky people)*		nikĺ *(sun)*, kaná *(moon)*
8	timángo *(ghosts)*	putútuli *(demons)*	endakáli *(humans)*
9	yuú endángi *(pond woman)*	énda kinĺngi *(REAL women)*	
10	ĺmú *(worm, maggot)*		koli, ilioli *(large worms)*[10]
11	wapáká *(eels)*		amané *(large fish)*
12	mónge *(frogs)*		akiwane *(large frog)*
13	kanopáto *(reptiles)*		motopoi *(tree python)*
14	yáka *(birds)*		láima *(cassowary)*, kámbi *(hawk)*
15	néne *(Arthropoda)*		
16	láima *(cassowary)*		
17	putútuli *(demons)*		

3.1.2 Covert Features

The discovery of the covert features, parenthood and brotherhood, occurred spontaneously when informants would volunteer that some particular terminal taxa item was considered to be the *father* of the entire group, or that two primary taxa were *brothers*. The items with covert features are presented in Chart 3.3.

The covert feature of fatherhood is based upon qualities of size (and possibly also power and authority), but habitat also affects the choice of the *father* of the taxon. In each case, the father named is the largest of all members of the set. In two cases, two fathers are given, each of which occupies a particular habitat: the fathers of the saá *game mammals* are the terrestrial tekéa *echidna* and the arboreal komáipu *tree kangaroo*; for the yáka *birds* we have the terrestrial láima *cassowary* and the kámbi *hawk, eagle*.

Of all the primary taxa only endakáli *humans* and yályakali *sky people* share parents: the nikí *sun* as father and the kaná *moon* as mother.[11] A further fact worth noting is that the sky people are also the only human-like animates that are not cannibals[12] (endakáli nánenge); timángo *ghosts*, yuú endángi *pond woman* and the putútuli *demons*, all kill and eat humans when possible.

The second covert category, *brotherhood*, is defined on the basis of at least two criteria, (i) domesticity, and (ii) morphological similarity. Domestic animates are given the wild counterpart as *brothers*, as wild dogs and bush pigs are given for tame/domesticated dogs and pigs. The yuú endángi *pond woman* is a sister of énda kinínji *real (i.e. human) women*. Humans' brothers are the kéwá *foreigners* who live at the fringes of the Enga area and are thought to be cannibals (dúpame náima nengé *they eat us*).[13]

Morphologically similar items are also considered to be brothers: yúi *rats*, tindío *bats*, and saá *game mammals* are all brothers and share the features of similar fur, legs and ears. Bats differ from the game mammals in having intelligence,[14] having wings, and a small tail (or no tail), while both the saá *game mammals* and yúi *rodents* are tailed. Rodents are a restricted food item, eaten only by women and possibly young boys, but never by men; game mammals are unrestricted. Rodents are described as being saá yángó *of the same patriline as game mammals* and awápá petengé *living together (i.e. as friends)*.[15] The amíá *native marsupial cat* is exceptional among the game mammals, since it is carnivorous and for this reason is said to be yána-injépae *dog-like* or even a brother of the dog.

3.2 *REDUNDANCY RULES*

The rules presented in Diagram 3.2 are here presented as an ordered set. The ordering is such that, between two rules, the one with broader scope is to have prior application (i.e., in order to prevent individual enumeration of features if it were instead applied later). The rules and items will be presented with English glosses only.

1. [+capable of dying] → [±heavenly]
2. [+heavenly] → [±originating people]
3. [+originating people] → *sky people*
4. [-originating people] → *sun, moon, stars*
5. [-heavenly] → [±leafy]
6. [+leafy] → *plants*
7. [-leafy] → [±volition]
8. [-volition] → *fire, water*
9. [+volition] → [±eyed]
10. [-eyed] → *worms*
11. [+eyed] → [±bony]
12. [-bony] → *insects*
13. [+bony] → [±hair/fur]
14. [-hair/fur] → [±aquatic]
15. [+aquatic] → *eels*
16. [-aquatic] → [±tail]
17. [-tail] → *frogs*
18. [+tail] → *reptiles*
19. [+hair/fur] → [±intelligence]
20. [-intelligence] → [±wings]
21. [+wings] → *birds*
22. [-wings] → [±forest dwelling]
23. [+forest dwelling] → *game mammals*
24. [-forest dwelling] → [±domesticated]
25. [-domesticated] → *rodents*

26. [+domesticated] → [±carnivore]

27. [+carnivore] → *dogs*

28. [-carnivore] → *pigs*

29. [+intelligence] → [±human-like]

30. [-human-like] → [±eared]

31. [+eared] → *bats*

32. [-eared] → *cassowaries*

33. [+human-like] → [±stone dwelling]

34. [+stone dwelling] → *demons*

35. [-stone dwelling] → [±pond dwelling]

36. [+pond dwelling] → *pond woman*

37. [-pond dwelling] → ±subterranean

38. [+subterranean] → *ghosts*

39. [-subterranean] → *humans*

It should be noted that the basic assumption here is that we are dealing with a closed set (the animates), and both the features and rules are determined in terms of contrast within that (closed) set. Furthermore it is assumed that any terminal item includes all directly preceding nodes, so that *birds* include the nodes (and features):

[+wings, -intelligence, +hair/fur, +bones, +eyed, +volition,
-feafy, -heavenly, +capable of dying, +concrete,...]

However, the inclusion of preceding nodes does not exclude the application of other features as well to *birds*, i.e., it makes no comment as to habitat, so that at a lower level (not discussed here), various birds may be [+arboreal], or [+terrestrial], or [+aquatic], or [+cave dwelling], or whatever.

The main advantage of the redundancy rules is that they filter out predictable semantic features: the lexical entry for *bird* need include only the semantic features [+capable of dying] (or [+volition]) and [+wings]. The redundancy rules allow for the insertion of the predictable features whenever these are desired. Furthermore, additional simplification is possible when it is considered that the term *bird* is the generic term for approximately 200 bird types, so that entries for these can refer directly to the generic term.

Several points of interest in the redundancy rules remain to be discussed.[16] One of these is that the items following node 16

([+human-like]) form the unordered portion of the rules: the four items may be randomly ordered (*demon, pond woman, ghosts,* and *humans*); with the exclusion of the rule for any of the first three, endakáli would be marked [+yuú aé katengé *terrestrial*]. The reason that the random ordering is possible is that these four items are at the same level of the taxonomy and the distinguishing feature, habitat, can be applied randomly.

3.3 *LOAN ITEMS*

The loan items presented below are from Tok Pisin or English and denote phenomena of Western European origin with which the Enga were not familiar in the pre-contact period. The items and their main feature(s) are given below, followed by the Enga assignment to classes.

1.	+satáne	*Satan*	[+subterranean...]	→ *ghosts*
2.	+pusíi	*cat*	[+forest dwelling...]	→ *game mammal*
3.	+bulumakáo	*cow*	[-carnivore...]	→ *pig*
4.	+paúli	*chicken*	[+winged...]	→ *bird*
5.	+písa	*fish*	[+aquatic...]	→ *eels*

In all cases the reason for assignment is, on comparison with the semantic rules, apparent. +Satáne is an interesting case, since here the Enga assign Satan to the same class as ghosts (rather than demons). Enga demons are in-human/un-human, while ghosts are merely dead humans; thus, the many human-like features attributed to Satan, plus the subterranean habitat, would cause the Enga to establish an equivalence between Satan and Enga ghosts.

Enga normally do not keep cats as pets, instead cats roam freely in the bush and forests, which accounts for the assignment of +pusíi to the *game mammal* class. Notable is the fact that all game mammals are edible and are non-restricted for consumption by men; cats also are both edible and non-restricted, just like saá.

The chicken would be assigned by the rules to the *birds* class, and this is also how it is classified by the Enga. The introduced carp are assigned to the eels class by the rules, and also by the Enga. Cattle are not only assigned to the *pigs* class, they are also considered to be the *father* of this class (cf. Chart 3.3 above). Pigs have long been a staple item in exchanges, marriage payments, and death and homicide restitutions (cf. 1.1 above). In 1969 it was reported that cattle were soon likely to be similarly exchanged in

the tée ceremonies featured by the Mae and Laiapo Enga. An additional test was provided when we presented Enga informants with photographs of some more exotic animals. Bears were immediately identified (on the basis of morphological features only, i.e., the Enga did not question as to habitat, etc.) as saá *game mammals*. We could predict that Enga would soon classify these as the father of the game mammals on the basis of size. Photographs of other quadrupeds (giraffe, antelope, etc.) brought forth queries to us as to 'what kind of things are those?', with more sophisticated Enga who might have seen the Mt. Hagen Show asking if they were +ósa *horses*.

The final example in the case of loan items is that of the +mangíi *monkey*: the Enga had always exhibited a strong interest in what kind of animal this might be. We obtained a coloured photograph of a chimpanzee dressed in a vest, tie, straw hat, and smoking a cigar; the immediate response was terrific: "what kind of a human is that?" (endakáli aipálepe?) In the discussion that followed among the Enga, the following features were noted: that this 'human' was wearing clothes, that it was wearing a hat (which led to the assumption that it was a man, akáli, rather than a woman), and that it was smoking. These are all clearly human activities, and as final proof, the Enga questioned us on other relevant points: was he married and what did his wife look like? Did he build houses, and what kind? Did he plant gardens and eat cooked food/sweet potato? Thus, it would seem that humans are actually contrasted to all other animates on the basis of social and cultural activities, rather than gross morphological features.[17]

3.4 *CHANGE OF CLASS*

This phenomenon has been discussed in 0.2.3.3 above; presented here are some cases from informants in which animate nouns change class. The interesting point is that the animates which do change class generally change into 'brothers' or the most closely related animate; large jumps from one level of the taxonomy to another, i.e., from insect to birds say, are not made. For example, the game mammals which were always climbing up and down trees to reach their tree nests got tired of this activity, so they grew wings and became bats. (The game mammals and the bats are brothers, cf. Chart 3.3). Smaller rats may grow up into the larger game mammals (and these two are also brothers).

Another case is that of a particular kind of green lizard who was drinking water near a stream and the stones cut off its tail, causing it to become a particular kind of green frog (cf. node 10 of Diagram

3.2). One belief[18] is that water 'makes things grow', and may cause metamorphosis: worms living in very wet soil or water are likely to become snakes. Children are warned that they shouldn't leave their feet in water too long, as they may become frogs.

The few examples suggest that certain items are related to one another by 'change of class' rules which change segments of features or add new features, e.g., we can propose the following to occur

6. lizard [-tail] => frog
7. worms [+wet, +larger] => snakes
8. rat [+larger] => game mammal
9. game mammal [+wings] => bat

These (6-9) confirm the validity of some of the features and rules postulated above.

3.5 *COMPARISON OF FEATURES*

The features of the animate nouns (3.1) contain two kinds of features comparable to those given (2.2.2) for the EV; these two kinds of features are habitat and size. The occurrence of cross-classification (0.2.2) among the items (i.e. animate nouns and EV features) is also briefly discussed.

Habitats (among the animate nouns) are also mutually exclusive among the EV, since palengé (subterranean), katengé (heavenly), and síngi (aquatic) denote mutually exclusive places of existence. An example of this is presented in the case of the birds, which show a tri-partite division based on place of existence (or habitat): flighted birds (arboreal) use the EV petengé, aquatic birds use the EV síngi, and terrestrial cassowaries use the EV katengé.

The second feature, size (or potential harmfulness) is exemplified among the animates by the covert feature of 'parenthood': the largest animate of the group is designated the 'father', e.g., the tree python being considered the 'father' of all the reptiles. Groups of animates which have two or more 'fathers' differentiate these on the basis of habitat, again emphasizing the importance of habitat: birds have the eagle or hawk as the arboreal 'father', and the cassowary as the terrestrial 'father'; the spiney anteater (terrestrial) shares the 'fatherhood' of the game mammals with the tree kangaroo, the largest of the arboreal game mammals (cf. Chart 3.3 for additional examples).

One major point about size is that this is obviously relative, and the next question to be considered would be, "to the Enga, what size *is* large, potentially harmful, etc.?" From the observation that the pig, dog, and cassowary are the animates sharing the EV class **katengé** (i.e., large) with men, it would seem that animals of dog-size or larger are potentially harmful and regarded by the Enga as such. When called upon to classify various exotic (i.e., Taronga Park Zoo) animals, one informant flatly stated: 'Large animals will take **katengé**, small animals will take **petengé**.'

Of the two features (size or habitat) used in both animate and EV classes, it is extremely difficult to determine which is higher ranking. Firstly, all potentially harmful animates among the Enga are both terrestrial and large (in Enga terms). The only conclusion for determining the importance of some particular semantic feature is that those items most important in the culture may be arbitrarily classed into what might be regarded (by an outsider) as an 'inappropriate' class. Dixon makes a similar statement when formulating rules for noun class membership in Dyirbal:

> (1) If some noun has characteristic X (on the basis of which its class membership would be expected to be decided) but is, through belief or myth, connected with characteristic Y, then generally it will belong to the class corresponding to Y and not that corresponding to X.
>
> (2) If a subset of nouns has some particular important property that the rest of the set do not have, then the members of the subset may be assigned to a different class from the rest of the set, to 'mark' this property; the important property is most often 'harmfulness' (1968:20).

Dixon applied these two rules in the explanation of the noun classes in Dyirbal, and notes additionally

> ...that the semantic basis of class membership in Dyirbal can only be explained in terms of an intimate knowledge of the beliefs, myths and habits of the people, knowledge that is presumably not normally available concerning the ancestor language (1968:123)

and further that

> it seems likely that some [class memberships] are WITHOUT EXPLANATION (as would be the case in any natural language): some may have had an explanation in terms of an earlier stage of the language, but the class assignment has been retained and the explanation lost as the language has altered (1968:122).

Another point of interest in the comparison of features of EV and animates, is the occurrence of cross-classification among the items. Among the animate nouns (Diagram 3.2), the quadrupeds form a subgroup [-winged], yet the EV usage divided this group in two, with the

yúi *rodents*, and saá *game mammals* using petengé, and the mená *pig* and yána *dog* using katengé. This also occurs among the plants, which are divided in the taxonomy into two main groups, hollow and solid-stemmed [+káita síngi]. The tánu *grasses* and sambáí *canes* are in contrast to the ítá *trees*, akaípu *Cordyline*, and ánga *pandanus*: yet all of these are classed by EV usage as tall, upright--katengé. This is also true among the cultivated plants, which form a group in the taxonomy as 'gardened' plants, yet use different EV: mapú *sweet potato* uses palengé, lyaá *sugar cane* uses katengé, and áwa *leafy green cultigen* uses síngi. In the taxonomy the focus is on the function, or morphology of the plants, and in the EV usage the focus is on the shape/posture of the plant. Thus, the conclusion is that clearly in differing situations (i.e. taxonomy versus noun classes), the Enga focus on different features, which results in the cross-classifications mentioned above.[19]

N O T E S

1. It is also true that [+concrete] nouns are more readily researchable than, for example [+inner state] or abstract nouns.

2. On return to Canberra, identification of all the primary taxa (and many of the terminal taxa) was made with the assistance of Dr. J. Hope, Department of Prehistory, the ANU, using only the folk definitions. Future work would include additional research in this area, and complete identification (preferably in the field) by a zoologist.

3. The contrast here is between the primary taxa or generic terms, such as dog (Canus sp.) and terminal taxa, such as Labrador, Doberman, poodle, etc. Intermediate taxa are such as terriers, hounds, retrievers, etc.

4. See Appendix B for Questions Used, especially Section 2, example 7.

5. Saá *game mammals* includes tree rats (which may be eaten); yúi *rodents* are the domestic rats (which are eaten only by women).

6. Láima *cassowary* is a member (the takánge *father*) of the birds, (cf. Capell 1948:368 yáka láima), but also holds a very special place in the Enga culture (along with bats), since these two are the only animates considered to have intelligence. Cf. Bulmer 1967 on the Karam beliefs regarding the cassowary. Other Highlanders also have such beliefs: Lyle Steadman reports (personal communication) that the Hewa believe male cassowaries to be female (since the males sit on the eggs), and the female cassowaries to be male. Cf. also note 11.

7. [+Aquatic] and [+pond dwelling] are in fact two different features, since aquatic in this case [+endakínya síngi] is wholly water dwelling (i.e., not at all capable of terrestrial life), while pond dwelling [+endáki peté petengé] in this case implies that the animate is capable of terrestrial life, but lives near water and perhaps returns there periodically; thus the contrast is between an amphibian-type existence and a wholly-aquatic one.

8. The semantic 'gaps' on Chart 3.3 (items which lack a 'brother' or a 'father') would most likely be filled by additional elicitation. These may be either 'occurring' or 'possible but non-occurring' items (as contrasted to 'impossible' items). Cf. 0.2.2, and Chomsky 1965:170 on 'accidental semantic gaps'.

9. Humans' parents are the sky people (directly) and the sun and moon (indirectly).

10. The only example given of 'motherhood' is ípa/endáki which is given for the wapáká *eels*. The explanation given was that since wapáká are completely aquatic and their only food is water, that water was their *mother*.

11. Meggitt (1965) relates one version of the Enga origin myth:

> The Mae believe that long ago the land was uninhabited. The only quasi-human beings then living were the sun and moon, 'the father and mother of us all'. Eventually they had many children, 'the causal or originating people', who reside in the sky in conditions similar to those on earth. These sky dwellers...in turn have had many descendants, who, although pale-skinned, resemble Enga; they are organized into patrilineal descent groups and they marry, feud, grow crops, raise pigs, pay death compensations and so on. After a time the sky beings colonized the earth.... The terrestrial society is thought to be isomorphic with the celestial society of the causal people (107f.).

12. While the sky people are considered by the Enga to be either disinterested or possibly benevolent, the ghosts, demons, and pond woman are all actively malevolent.

13. These kéwá are the Hewa, not the language group known as the Kewa.

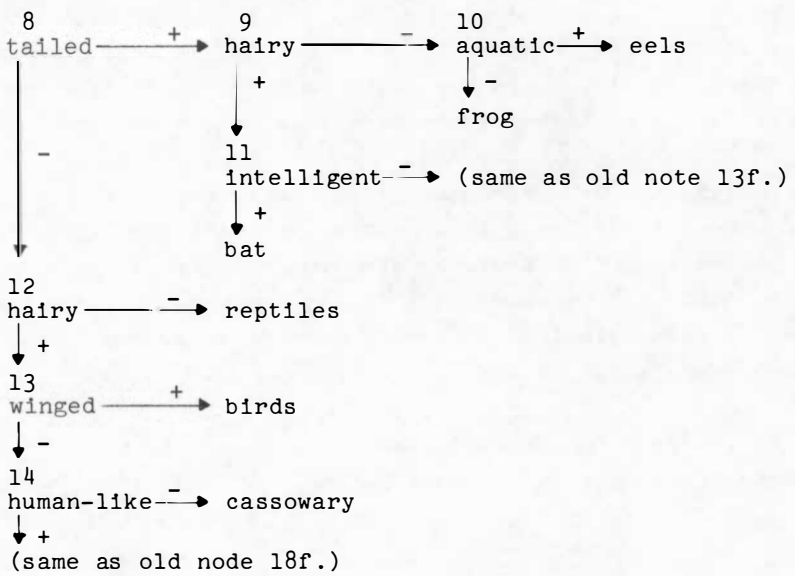
14. Both bats and cassowaries occupy a special place in the taxonomy; bats are believed to be harbingers of death, and bring the omens of

impending disaster (earthquake or landslide) sent by the **timángo** *ghosts*. Since the bats hear and understand the ghosts' language/omen and bring this to the Enga, they are considered to be intelligent. Cf. also note 6.

15. Would this **awápá petengé** *living together* in fact imply also that neither eats the other, since to do so would constitute game mammal cannibalism? Cf. that the native cat is considered to be a brother of the dog, since it is carnivorous.

16. When ordering the rules (based mainly upon criteria of formal simplicity), one other major possibility of an ordering form does present itself. In Enga folk classification the feature [±tailed] appears frequently as a distinguishing marker: the presence or absence of a tail, the kind of tail, whether it is all skin, furry, tufted, etc., all are relevant. Cf. 3.4, in which lizards lose their tails and become frogs; i.e., node 10 of Diagram 3.2). (This is in contrast to the nonchalance with which reproductive methods of various animates are regarded: they are not used for classification similar to our egg-laying, amphibian, marsupial and placental mammals). One of the questions asked of the chimpanzee was 'does he have a tail?' Tails appear in the rules once (node 10: lizards and frogs). This could lead to some speculation as to the possibility of ordering the feature [±tailed] into a higher node of the tree.

Embarking briefly on this train of thought, we could postulate introducing the feature [±tailed] at node 8. Under these conditions, the following revised tree would result:



There are at least three difficulties in this ordering. The first is that [±hairy] clearly *is* applied twice giving more than a suspicion of cross-classification (cf. 0.2.2) or incorrect ordering of the features/rules; this is contrasted to the prior ordering, in which the 'tailed' features differed in [±hairy] (cf. Diagram 2.2, nodes 10 and 15). The second difficulty is that not only is [±hairy] applied twice, the distinction which the previous ordering of that rule made, (i.e., that of the skinned or non-hairy animates as a sub-set of the animate group), has been completely obliterated. The final difficulty is that the new ordering has also lost the distinction made by the Enga in regard to the cassowaries and bats, i.e., that these animates are considered to be [+intelligent] while all other animates are not so considered. In view of these difficulties, the previous ordering was preferred (i.e., that of Diagram 3.2).

This problem is that of the selection of features from the possible universe of features. One of the major assumptions in ethnoscience is that of the contrast set: "a class of mutually exclusive segregates which occur in the same culturally relevant environment...these segregates 'share at least one defining feature'...i.e., that which characterizes the environment in which they occur.... The domain of the set is the total range of meanings of its segregates" (Sturtevant 1964:107). This leads once again to the problem of discovery, as to how one determines the culturally significant sets and their included units. In the Enga comparison of two terminal items, the feature noted *should* be the highest mutual node: i.e., in the contrast between birds and eels, the noted feature should be that eels are hairless; as far as I can determine, it is just as likely to be that the informant reports that birds have wings, that eels are aquatic, etc.

17. Prof. Andrew Strathern (personal communication) reports that the Melpa of Mt. Hagen classify monkeys as game mammals; it is probable that Enga, on seeing small arboreal monkeys in a zoo, might well, too.

18. Change of class and 'transformations' as detailed in this section (3.4) are based upon traditional Enga beliefs--the tailless green lizard which became a particular green frog is from one of the Enga fables (i.e. and thus not regarded as a fact); however, the game mammals which were always climbing trees, and so grew wings and became bats are regarded as fact.

19. A point of interest is the comparison of the animate nouns' features with those of another language. Mathiot (1962) divided Papago

folk taxonomy into plants and living things, with a further subdivision of living things into people, birds and animals. Pilcher (1967) also worked with Papago and his work is comparable to the one presented here for Enga on yet another point, since it was based on the folk definition technique first used by Casagrande and Hale (1967) in Papago. "My own research was oriented toward the examination of the folk taxonomy of the Papago by means of semantic components derived from 'folk definitions'.... This approach was much influenced by Conklin's call for lexicographical treatments of folk taxonomies (1962), and by the work of Casagrande and Hale (1967)" (Pilcher 1967:204). Pilcher extracted the features from the definitions that had been obtained for the named taxa, and these are:

1. ...(which think)
2. ...(which are afraid of people, fearful things)
3. ...(which are domestic animals)
4. ...(which fly)
5. ...(which are thorny)

These features (or semantic components) also occur in Enga, where we have such features as [±intelligent], [+winged], the covert feature of brotherhood, based on the distinction between wild and domestic animals, and the feature [+thorny] (which applies in both Enga and Papago to plants, although the spiney anteater is said to have *thorny fur* (**ítí néngenénge katápae** *spines*). Thus, of the five features Pilcher uses in Papago, all five are found in Enga.

CHAPTER FOUR

4.0 PREDICATIONS

We have now discussed one type of classificatory verb in Enga, the EV (2.0) which co-occurs with the [+concrete] nouns, and a sub-set of nouns (the animates) which co-occur with them (3.0). This chapter will deal with the second type of Enga classificatory verb, the pro-verb of predications.

The form of the predications is an adjunct which co-occurs with a pro-verb. With very few exceptions, the pro-verbs of the predications are in complementary distribution with the EV in relation to the types of co-occurring nouns, viz., the pro-verbs of the predications co-occur only with [-concrete] nouns.[1] This chapter will deal firstly with the form and syntactic properties of predications, and secondly with their semantics. A brief discussion of the problems arising from attempts to account for the predications in a generative transformational framework will conclude the chapter.

4.1 *FORM AND SYNTACTIC PROPERTIES*

In this section we will discuss the form of the predications, why they cannot be regarded as objects, two sub-sets of the predications which normally occur in specific grammatical forms, and another sub-set which may be verbalized in the eastern dialects of Enga.

4.1.1 Form

The form of the predications is an adjunct (normally a noun), which co-occurs with a pro-verb which has a general meaning. The adjunct functions to modify the general meaning of the pro-verb into a specific action. Some examples of predications are:

1. Yokó dúpa ápu le-ly-ámi-no.
   leaf they dry utter-PRES-3PL-DEC
   The leaves are drying.

2. Náima kúmanda pi-ngí.
   we death payment do-HAB
   We always make death payments.

3. Baa-mé uaá méndé nánga pi-ly-á-mo.
   he-AG *axe a sharp hit*-PRES-3SG-DEC
   He is sharpening an axe.

4. Baa-nyá móko dóko pakélyó si-ly-á-mo.[2]
   he-POSS *leg the scar hear*-PRES-3SG-DEC
   His leg is scarred.

5. Baa-mé uaá dóko waá nyi-ly-á-mo.
   he-AG *axe the steal take*-PRES-3SG-DEC
   He is stealing the axe.

While normally any noun may occur with many different verbs, e.g.

6. Baa-mé (*he-*) { akáli *man* / ándá *house* / jípi *jeep* } méndé *a* { pi-ly-á-mo. *hit*-PRES-3SG-DEC / kande-ly-á-mo. *see*-PRES-3SG-DEC }
   He is hitting/seeing a man/house/jeep.

this is not the case with the predications, in which the adjunct can normally co-occur with only one specific pro-verb. (Adjuncts with more than one pro-verb are discussed in detail in 4.2.3 following.)

7. Baa-mé yamé pi-ly-á-mo.
   he-AG *cover hit*-PRES-3SG-DEC
   He is covering (it).

7a. Baa-mé yamé (*he-*AG *cover*) { *le-ly-á-mo. *utter*-PRES-3SG-DEC / *kande-ly-á-mo. *see*-PRES-3SG-DEC / *pi-ly-a-mó. *do*-PRES-3SG-DEC }

The general meaning of the predication is carried by the main verb, here pya- *hit*; the adjunct yamé must logically produce the modification of this general meaning to *cover*, yet yamé does not occur elsewhere, independently as in the sentence (8) or (9).

8. *Ongo yame penge mende.
that cover jar a
That's a covered jar.

8a.*Ongo yame mende.
that cover a
That's a cover.

The correct form of (8) would be (8a):

8b. Óngo pengé yamé pyá-pae méndé.
that jar cover hit-STA *a*
That's a covered jar.

This particular form of the predications, the stative, will be discussed in more detail in 4.1.3. Examples (7, 7a, 8, 8b) and (9) exemplify that the adjunct must co-occur with its appropriate proverb.

Furthermore, it is not normally possible to verbalize the adjunct:

9. Baa-mé pengé dóko *yame-ly-a-mo.
he-AG *jar the cover*-PRES-3SG-DEC
He is covering the jar.

The correct form of (9) is (9a) with the predication:

9a. Baa-mé pengé dóko yamé pi-ly-á-mo.
he-AG *jar the cover hit*-PRES-3SG-DEC
He is covering the jar.

When predications are used in modalities, the appropriate co-occur-occurring verb (and no other) must also appear; in the case of tísa pingí *cut, break*, we cannot have tísa *lengé (or any other verb).

10. Baa-mé íta tísa pyá-a pe-ly-á-mo.
he-AG *wood cut do*-INF *go*-PRES-3SG-DEC
He is going to cut the wood.

10a.*Baa-me ita tisa pya-la pe-ly-a-mo.
cut hit-INF

10b.*Baa-me ita tisa pe-ly-a-mo.
cut go-PRES-3SG-DEC

11. Baa-mé íta tísa pyá-a-nya masi-ly-á-mo.
he-AG *wood cut do*-INF-GEN *think*-PRES-3SG-DEC
He wants to cut the wood.

11a.*Baa-me ita tisa pya-la-nya masi-ly-a-mo.
cut hit-INF-GEN

11b.*Baa-me ita tisa masi-ly-a-mo.

The same holds true for other cases of complementation:

12. Baa-mé ítá tísa pyó-o etá-pa-la ipá-t-á.
he-AG *wood cut* *do*-O *finish*-COMP-INF *come*-FUT-3SG
When he's finished cutting the wood, he will return.

12a.*Baa-me ita tisa pya-o eta-pa-la ipa-t-a.
hit-O

12b.*Baa-me ita tisa eta-pa-la ipa-t-a.

13. Baa-mé ítá tísa pyó-o andá-ka ka-ly-á-mo.
he-AG *wood cut* *do*-O *house*-LOC BE-PRES-3SG-DEC
He's at home cutting the wood.

13a.*Baa-me ita tisa pya-o anda-ka ka-ly-a-mo.
hit-O

13b.*Baa-me ita tisa anda-ka ka-ly-a-mo.

4.1.2 Objects

In any consideration of the possible relationships between a noun and co-occurring verb, the question immediately arises, regarding such a combination as we find in the predications, if the adjuncts are actually objects. In this section I will discuss the normal objects of Enga and conclude with the examples of the strict syntactic restrictions applying to the predications which preclude our considering them as objects.

As presented above in (6), in Enga normally any noun may occur as object with a number of different verbs; in these cases, the subject is marked with the agentive, and the object is unmarked; there may also be a number of modifications to the object, such as determiners, adverbs, adjectives, and locatives. Some examples of these types of modification are presented below:

14. Baa-mé nuú { pitaká / *all* / elyakáo / *sneakily* / méndé a / auú pyó-o / *well* *do*-O } pi-ly-a-mó.
she-AG *netbag* *do*-PRES-3SG-DEC
She is making a/all netbag/s well/sneakily.

15. Baa-mé nuú (eteté) (épé) méndé { andá-ka pitú-u / *house*-LOC BE-O ; elyakáo / *sneakily* ; auú pyó-o / *well do*-O } pi-ly-a-mó.
she-AG *netbag very good a* *do*-PRES-3SG-DEC

She is making a (very) (good) netbag at home/well/sneakily.

The predications differ in this in that they do not normally permit modification[3] between the adjunct and the pro-verb:

16. Baa-me penge yame { *elyakao / *sneakily ; *auu pyo-o / *well do*-O } pi-ly-a-mo.
he-AG *jar cover* *hit*-PRES-3SG-DEC

He's covering the jar sneakily/well.

Instead, modification precedes the predication:[4]

17. Baa-mé pengé { elyakáo / *sneakily* ; auú pyó-o / *well do*-O } yamé pi-ly-á-mo.
he-AG *jar* *cover hit*-PRES-3SG-DEC

He's covering the jar sneakily/well.

As nouns are modified postnominally in Enga and verbs preverbally, this is further evidence that it is the predication that is modified as a verbal unit, rather than the noun in a verb phrase.

There is a small set of adjuncts which appear in the predications which are exceptions to the above. These are five [+concrete] adjuncts: two body parts (yanú *skin* and langálú *forehead*), two plants (yokó *leaf* and tánu *grass*), and one artifact (yandá *spear*). Aside from being marked [+concrete] (and, by the way, these items also occur with the EV appropriate to their features), these are the only adjuncts which may occur independently elsewhere in the sentence. Thus, we may have examples such as

18. Óngo tánu méndé.
that grass a
That's a (kind of) grass.

19. Óngo namba-nyá yandá.
that I-POSS *spear*
That's my spear.

20. Naima-me yoko dake nenge-me.
we-AG *leaf this eat*-ASSOC
We eat this leaf; this leaf is edible.

21. Yaíná nyé-pa-la baa-nyá yanú itáté pi-ly-a-mó.
sick take-COMP-INF *he*-POSS *skin fire do*-PRES-3SG-DEC
Being sick, he has fever.

When occurring in the predications, each adjunct co-occurs with only one pro-verb and has one specific meaning:

22. Náima-me dúpa yandá pi-ly-ami-nó.
we-AG *them spear do*-PRES-3SG-DEC
We're fighting them with weapons/spears; we're waging war with them.

23. Baa-mé tánu pi-ly-á-mo.
he-AG *grass hit*-PRES-3SG-DEC
He's cutting grass.

24. Maá dóko yokó pi-ly-a-mó.
taro the leaf do-PRES-3SG-DEC
The taro is growing leaves.

25. Baa-mé mapú yanú pi-ly-á-mo.
he-AG *sweet.potato skin hit*-PRES-3SG-DEC
He's peeling the sweet potato.

26. Baa-mé langálú mini-ly-á-mo.
he-AG *forehead hold*-PRES-3SG-DEC
He's swearing (an oath).

Thus, this set is anomalous[4] in two ways and completely different from all other adjuncts: firstly the adjuncts have an independent meaning, which is that of a [+concrete] noun, and secondly, these adjuncts may occur elsewhere independently in the sentence; they are not restricted to co-occurrence only with the predications. However, when these adjuncts occur in their normal form in the predications, it is only with the appropriate pro-verb: (22a-26a), are all ungrammatical.

22a.*Naima-me dupa yanda pi-ly-ámi-no.
we-AG *them spear hit*-PRES-3SG-DEC
We are fighting them.

23a.*Baa-me tanu pi-ly-a-mó.
he-AG *grass do*-PRES-3SG-DEC
He's cutting the grass.

24a.*Maa doko yoko pi-ly-a-mo.
taro the leaf hit-PRES-3SG-DEC

25a.*Mapu yanu pi-ly-a-mo.
sweet-potato skin do-PRES-3SG-DEC

26a.*Baa-me langalu pi-ly-a-mo.
he-AG *forehead do*-PRES-3SG-DEC

Further evidence of the predications' special differences from ordinary verb phrases will be highlighted by a brief consideration of several 'compound' verbs in Enga. These verbs seem to be cases in which the adjunct has become very closely linked with the co-occurring pro-verb, so far that they have in fact become one word. A few examples of predications with the compound verbs appearing side by side are presented in the table below.

TABLE 4.1

Predication	Meaning	Compound Verb
wái lyíngi	*create*	wasingí[5]
sáká tengé	*arise, get up*	sakaténge
auú singí	*carry on shoulders*	aúsingi

As well as these cases of both the predication and the compound verb occurring, Enga also contains a number of verbs, possibly derived from earlier predications (adjunct plus pro-verb), in which today only the multi-syllable verb survives:'

27a. sandasíngi *climb from one tree to the next*

27b. yapengé *elect*

27c. mandenyíngi *shiver*

27d. yambipénge *bend in an arc*

27e. kalumbénge[6] *release water through a dam* ({$^{p}_{mb}$} alternate in certain environments in Enga as in pumbútí and pupútí *black*).

4.1.3 Predications in the Stative Form

The stative form in Enga functions as an adjectival suffix, which enables verb forms to modify nouns. Thus, from the verb kuma- *die*, the stative form is used to produce the modification *to be dead:*

Akáli kumá-pae dóko.
man die-STA *the*
The dead man.

Predications may also be used in this form, and in fact a particular sub-set, those denoting colour (28, 29. 30) most frequently appear in this form:

28. Akaípu taiyóko pí-pae méndé.
cordyline red do-STA *a*
A red cordyline.

29. Óngo kyóo lá-pae.
that white utter-STA
That's white.

30. Óngo wené pyá-pae.
that blue hit-STA
That's blue.

This particular sub-set does not appear in the usual conjugation as normal predications with person-number and tense markers:

31. *Akaipu taiyoko pi-ly-a-mo.
cordyline red do-PRES-3SG-DEC

32. *Yuu kyoo le-ly-a-mo.
earth white utter-PRES-3SG-DEC

4.1.4 The O-Complementizer

The O-complementizer functions as a temporal suffix which denotes simultaneous action. The following examples illustrate this:

33. Baa-mé kalái pyó-o ka-ly-á-mo.
he-AG *work do*-O BE-PRES-3SG-DEC
He is working (Literally: *He is existing working*).

The predications may also be used in this form

34. Baa-mé ée lá-o pi-ly-á-mo.
he-AG *cry utter*-O *sit*-PRES-3SG-DEC
He is crying sitting.

These predications are also used with person-number and tense markers:

35. Baa-mé ée le-ly-á-mo.
he-AG *cry utter*-PRES-3SG-DEC
He is crying.

However, a particular small sub-set of the predications seem to occur only in the O-complementized form, rather like the preceding sub-set which occur only in the stative form. Thus, we have (36) but not (36a):

36. Baá álo pyá-o pe-ly-á-mo.
he run hit-O *go*-PRES-3SG-DEC
He is running (Literally: *He is running going*).

36a.*Baa alo pi-ly-á-mo.
he run hit-PRES-3SG-DEC

Another example in this sub-set seems to have an adverbial function:

37. Baá moó lá-o pe-ly-á-mo.
he slow utter-O *go*-PRES-3SG-DEC
He is going slowly.

37a.*Baa moo le-ly-a-mo.
he slow utter-PRES-3SG-DEC

We have so far isolated two sub-sets of adjuncts in the predications, those which use only the stative form (kyóo lápae *white*, wené pyápae *blue*) and those using only the O-complementized form (álo pyáo *run*, moó láo *slowly*); in addition, we have a further sub-set of adjuncts which may occur in both of these forms. A series of examples are presented below to illustrate this phenomenon.

38. Baá akáli auú pí-pae méndé.
he man good do-STA *a*
He's a good man.

39. *Baa akali auu mende.
he man good a

40. Baa-mé kalái auú pyó-o pi-ly-a-mó.
he-AG *work good do*-O *do*-PRES-3SG-DEC
He is working well.

41. *Baa-mé kalái auú pi-ly-a-mó.
he-AG *work good do*-PRES-3SG-DEC
He is working well.

42. Baa-mé kalái auú pí-pae méndé pi-ly-a-mó.
he-AG *work good do*-STA *a* *do*-PRES-3SG-DEC
He is doing a good job.

43. *Baa-me auu pi-ly-a-mo.
he-AG *good do*-PRES-3SG-DEC
He is doing good.

44. Baa-mé auú pyó-o pi-ly-a-mó.
he-AG *good do*-O *do*-PRES-3SG-DEC
He is doing well-good.

4.1.5 Verbs

Table 4.2 presents a list of the major verbs which co-occur in the predications with adjuncts. As mentioned above (4.0) only a limited number of verbs co-occur in the predications, and three of these (lengé *utter*, pingí *do*, and píngi *hit, strike*) account for 63 per cent of all verbs recorded in the predications. The predications themselves account for 66 per cent of all Enga verb forms, while the remaining verb forms cover 34 per cent. Thus, we have twice as many predications as other verb forms in the corpus, and of these (i.e. the predications), roughly two-thirds are limited to co-occurrence with one of the three pro-verbs listed above.

TABLE 4.2

Verb	Gloss	No.	per cent
lengé	*utter*	334	32
pingí	*do, make*	247	23
píngi	*hit, strike*	80	8
síngi	*hear*	45	4
nyíngi	*get, take*	40	4
minínngi	*hold*	29	3
kaengé	*be*	30	3
palengé	*lie (inside)*	24	2
katengé	*stand*	21	2
pengé	*go*	15	1
nengé	*eat, consume*	16	1
tengé	*burn*	15	1
miscellaneous		172	16
		1068	100

The total corpus was 5,545 items; of these, the verbal forms totalled 1,607:

1,068	Predications
539	Other Verbs
1,607	

4.1.6 A Problem

Kyaka, the easternmost Enga dialect (and the areas bordering it) permits verbalization (i.e., inflection for person, number and tense) of certain types of adjuncts ([+inner state], [+colour] and [+quality]), which in all other Enga dialects occur only as adjuncts in the predications (i.e., cannot be inflected for person, number and

tense).[7] Following are some examples to illustrate this phenomenon and a brief discussion of it.

1. [+inner state] In the eastern dialects the following are permissible:

45. Baá tandá-l-u-mu.
he pain-PRES-3SG-SENSE
He is paining (i.e., *he is in pain*).

46. Baá maká-l-u-mu.
he fed.up-PRES-3SG-SENSE
He is fed up (with someone or something).

47. Baá kondá-l-u-mu.
he pity-PRES-3SG-SENSE
He is pitying (someone).

In other dialects the same examples would be expressed via predications using the verb **kaengé**.

45a. Baá tándá kayá-l-u-mu.
he pain feel-PRES-3SG-SENSE
He is feeling pain.

46a. Baá máká kayá-l-u-mu.
he fed.up feel-PRES-3SG-SENSE
He is fed up.

47a. Baá kóndó kayá-l-u-mu.
he pity feel-PRES-3SG-SENSE
He is feeling pity, he has pity.

2. [+colour] In the east we have

48. ʃtá dóko saká-l-u-mu.
tree the green-PRES-3SG-SENSE
The tree is green (i.e., *healthy, living*).[8]

In other dialects, (48) would be expressed by

48a. ʃtá dóko sáká py-ú-mu.
tree the green do-PRES.3SG-SENSE
The tree is green (i.e., *healthy, living*).

3. [+quality] In the east we have

49. Akáli dóko kendá-l-u-mu.
man the heavy-PRES-3SG-SENSE
The man is heavy.

50. Akáli dóko muiyá-l-u-mu.
man the short-PRES-3SG-SENSE
The man is short.

In the other Enga dialects, these would be

49a. Akáli dóko kéndá pí-pae.
man the heavy do-STA
The man is heavy.

50a. Akáli dóko múu pí-pae.
man the short do-STA
The man is short.

The presence of the verbalized adjunct (with no co-occurring 'cognate object' adjunct) in the eastern dialects of Enga leads us to ask what exactly is present in the deep structure of the predications (in the western dialects) and what is present in the deep structure of the verbalized adjuncts? This question will be discussed in Section 4.3.

We will conclude this section by drawing special attention to some negative examples which illustrate several points:

i. that the verbalized adjuncts must occur only in the predications (45a, 46a, 47a);
ii. that some of these may occur only in a specific form of predications (i.e. the stative form) (examples 49a, 50a); and
iii. that the verbalized adjuncts are a set which is mutually exclusive with those [+concrete] nouns which co-occur with EV (2.0); examples (51-53) will illustrate this:

51. *Akali dupa akali-ly-ami-no.
man the man-PRES-3PL-DEC
**The men man.*

52. *Dii dupa dii-lya-ami-no.
fruit the fruit-PRES-3PL-DEC
**The fruits fruit.*

53. *Taiyoko taiyoke-ly-a-mo.
blood blood-PRES-3SG-DEC
**Blood bloods.*

These [+concrete] nouns cannot occur as inflected verbals, but instead co-occur with the existential verbs:

51a. Akáli dúpa kate-ngé.
man the BE-HAB
Men exist.

52a. Dií dúpa lyí-ngi.
fruit the BE-HAB
Fruits exist.

53a. Taiyóko dóko pale-ngé.
blood the BE-HAB
Blood exists.

This is, of course, still further evidence for classificatory verbs in Enga: both the existential classificatory verbs and the pro-verbs as classificatory verbs (or verbals), since they occur in complementary distribution in relation to the [+concrete] nouns.

4.2 *SEMANTICS*

4.2.1 Rules

In the preceding section we have discussed the predication, its form, and one particular problem (4.1.6). We will now turn to the major question, i.e., to what extent is it possible to formulate a set of rules which will operate on the semantic features of the adjuncts used in the predications and which will thus enable us to determine the correct assignment of the adjuncts to their co-occurring verb in the predication?

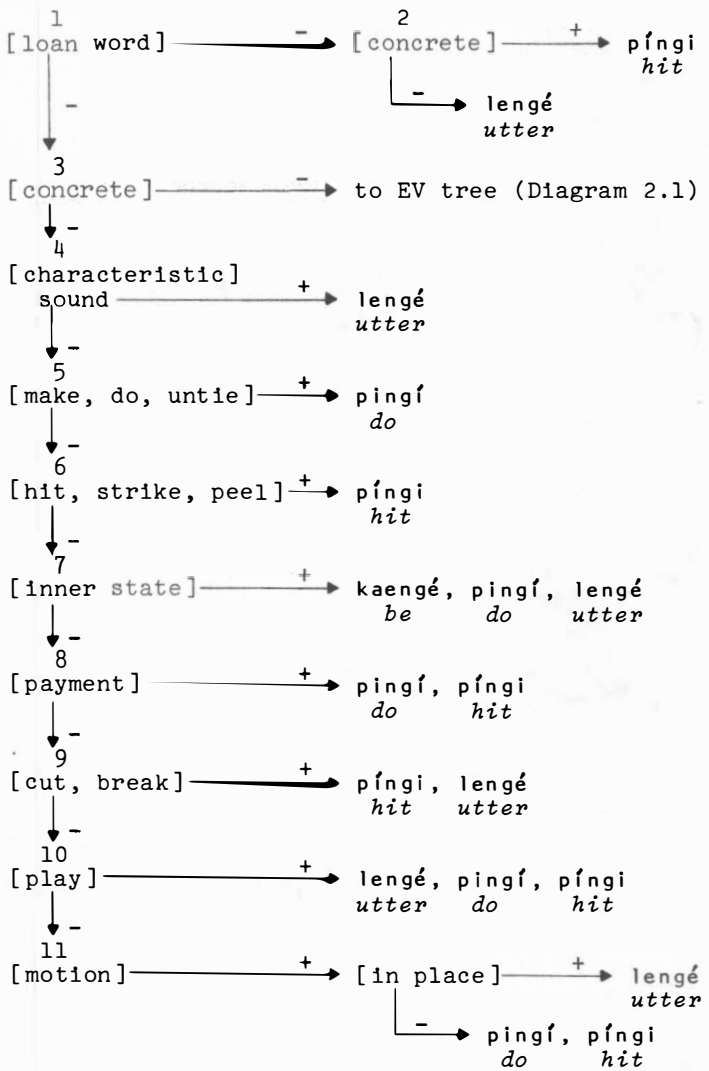
In attempting to formulate these rules, we will limit ourselves to the first three of the co-occurring verbs (i.e., lengé, pingí, and píngi) for two reasons, firstly, these three verbs account for 65 per cent of all the co-occurring verbs, and secondly, since a limited number will avoid unnecessary complication of the rules.

A tree diagram is presented in Diagram 4.3 and will be discussed in the following section.

The rules presented in Diagram 4.3 are ordered through only the first seven nodes. The first node presents the choice of loan word or not, since (as we will discuss in 4.2.2 below) the assignment of loan words is highly predictable. The second node is tentative, but it seems very predictable that [+concrete] loan items are assigned píngi *hit*, with all others taking lengé *utter*. Two examples for this node would be:

54. +líti le-ngé[9]
read utter-HAB
to read

DIAGRAM 4.3



55. +pépa pí-ngi
paper hit-HAB
to write

The rules would not permit:

54a.*+liti pi-ngi
read do-HAB

or

55a.*[+]pepa le-nge
paper utter-HAB

The third node would remove all other [+concrete] nouns and send them to the EV semantic redundancy rules (cf. Diagram 2.1). Of necessity, this node must follow the loan words (i.e. to allow the [+concrete] loan words to be correctly assigned to pro-verbs), yet we want it as near the top of the tree as possible (in order to remove the [+concrete] nouns which co-occur with EV as soon as possible). An example for node three would be (56), with (56a-b) showing ungrammaticalities arising from incorrect application of the rules:

56. akáli kate-ngé
man BE-HAB
men exist

56a.*akali pi-ngi
man do-HAB

56b.*imbu kate-nge
anger BE-HAB

Nodes (5-7) in Diagram 4.3 remove adjuncts which fall into the 'main' semantic domain/features of the three most frequently used pro-verbs: lengé *utter*, pingí *do*, and píngi *hit*. These are ordered by frequency of the pro-verb in the predications, based upon the data presented in Table 4.2. Examples for each of these nodes would be

57. Weé le-ngé
song utter-HAB
to sing (a song)

57a.*kalai le-nge
work utter-HAB

57b.*wee pi-ngi
song do-HAB

58. kalái pi-ngí
work do-HAB
to work

58a.*kalai pi-ngi
work hit-HAB

59. tánu pí-ngi
grass hit-HAB
to mow (grass)

59a.*tanu pi-ngí
grass do-HAB

59b.*tanu le-ngé
grass utter-HAB

Node seven is the last of the ordered nodes; it is ordered after the 'main' domain of the main pro-verbs, and is the first node which allows intersection (cf. 4.2.3) for the [+inner state] adjuncts. This group of adjuncts has been discussed in 4.1.6, and will be further discussed in 4.2.3 (on the intersection of kaengé and pingí and their assignment to inner state adjuncts). Some examples for this node would be

60. ímbu kae-ngé
anger be-HAB
to be angry

60a.*imbu pi-ngi
anger hit-HAB

60b.*tee kae-nge
restitution be-HAB

The remaining nodes are ordered by frequency, and, like the inner state (node seven) also allow the intersection of pro-verbs. The point to be noted is that the assignment of pro-verbs over nodes eight through eleven, even though allowing intersection, does not allow the pro-verbs to be assigned in random order; the pro-verbs are not in free variation: even though two pro-verbs may be permitted, the others are excluded. Some examples to illustrate this point are:

61. watapáe pi-ngí *or* pí-ngi
marriage do-HAB *or hit*-HAB
to make marriage payment

61a.*watapae le-nge

61b.*watapae kae-ngé

62. nánga pí-ngi *or* le-ngé
sharp hit-HAB *or utter*-HAB
to sharpen

62a.*nanga pi-ngi
sharp do-HAB

Node eight (payments) is puzzling, since some payments may occur only with pingí *do*, while others occur only with píngi *hit* (and yet

others, as in (8) may occur with both pingí and píngi). It would seem just as likely that payments should co-occur with lengé *utter*.[10]

Three alternatives offer themselves to account for these problem cases; it is either such that

(i) Assignment of verbs to predications is in fact completely arbitrary, therefore a multiple-choice node forces an arbitrary choice; or

(ii) Additional very specific semantic investigation on only the multiple choice nodes, in a variety of contexts and with a large group of informants, might provide additional data which would enable additional semantic features to be postulated, providing additional branches and unique assignment of verbs in predications; or

(iii) Assignment of verbs to predications (or the adjunct-verb co-occurrence) is governed by semantic features, but there is a sizeable residue of cases where the co-occurrence restriction is semantically arbitrary.

(i) presents the possibility that the problem is essentially unsolvable at the present stage of semantic development (or perhaps unsolvable at any time); (ii) and (iii) present the possibility that the problem is in fact solvable, but not with the present data; additional data and work would be necessary.

4.2.2 Loan Items

The assignment of loan items often provides additional evidence for semantic features. Adjuncts which are loan items from Tok Pisin are presented in Table 4.4. Of the twenty-eight cases, only four involve a verb other than lengé *utter*; these are six cases using the verb píngi *hit*. It is interesting to note that several of the adjuncts seem, to the native speaker of English, to be [+concrete] (lock, paper, ball, tax, cards, change). However, it appears that these items, when used in Enga are viewed as [-concrete]. The contrast here is between *vote* (noun) and *to vote* (verb), likewise, *lock* and *to lock*, *paper* and *to paper*, *ball* and *play ball*, *tax* and *pay taxes*, *cards* and *play cards*, and *change* and *to change*.

Most of the loan adjuncts which take lengé are [+event/activity]. In this context it is notable that even when loan items borrowed are verbs in Tok Pisin (and some are borrowed with the Tok Pisin verb marker -im), the items are not borrowed as verbs, but used as adjuncts in predications. This would seem to indicate that, while Enga may borrow nouns from Tok Pisin (cf. Section 3.3), Enga does not borrow

verbs as such.[11] Some of the Tok Pisin verbs assigned to predications in Enga include: daunimi *overcome*, makimi *mark*, posimi *boss*, and sakimi *sack/jostle*.

TABLE 4.4: LOAN ITEMS IN THE PREDICATIONS

Adjuncts assigned to píngi *hit*:			
to lock	lóko píngi	lóko	*lock*
to write	pépa	pépa	*paper*
to play ball	kosá	kosá	*ball*
to pay taxes	takísa	takísa	*tax*
to play ball	pusá	púsa	*ball ?*
to have an injection	níli	níli	*nail, injection*
to wash	wasawásа	wásа	*wash ?*
Adjuncts assigned to lengé *utter*:			
to ruin, destroy	bakatapú lengé	bakatapú	*ruin*
to vote	bóta/bósa		*vote*
to boil	boló		*boil*
to assemble	búŋa		*assembly*
to overcome	daunimí		*down*
to arrive	kámapu		*come up*
to gamble, play cards	kása		*cards*
to gamble, play Lucky	lakí		*lucky*
to be crooked	kutungúsa		*crooked*
to read	lí́ti		*read*
to have election	lesísa/létesa		*race*
to lose	lúsa		*lose*
to mark	makimí		*mark*
to patrol	pasatóle		*patrol*
to supervise	pósimi/púsa		*boss*
to be full	pulapú		*full up*
to jump/hop	sakimí		*sack, jostle*
to change money	sanísa		*change*
to dislike	súkú		
to attend school	sukúlu		*school*
to swim	supímí		*swim*
to win, triumph	winí/winímі		*win*
to litigate, to have a court	kósa		*court*

4.2.3 Intersection

The total number of predications (cf. Table 4.2, Section 4.1.5) is 1182; of this total we have nineteen cases (1.7%) in which more than one verb can appear in the verb slot of the predication.[12] We will discuss these nineteen cases in this section, since all the others are uninteresting by virtue of their very regularity. However, it must be stressed that the alternate verbs are not in free variation; the only two pro-verbs to intersect with respect to **páke** *steal* are **nyíngi** *take* and **nengé** *eat*, as in (63) and (64)[13]; any other pro-verbs in co-occurrence with **páke** would make the utterance ungrammatical as in (65)

63. **páke** nyí-ngi
steal take-HAB
to steal

64. **páke** ne-ngé
steal eat-HAB
to steal

65. **páke** *steal* { ***pi-ngí** *do*-HAB; ***le-ngé** *utter*-HAB; ***te-ngé** *burn*-HAB; etc. }

Again, we must look at both parts of the predication:

(i) the adjunct: what kinds of adjuncts occur in the cases of intersection?

(ii) the verb: what verbs occur in these cases; and are these the most frequent of the verbs occurring in the predications, or instead some entirely different group of verbs?

Table 4.5 presents a matrix of the 19 cases of intersection in the predications.

4.2.3.1 *The Adjuncts in Intersection*

The adjuncts presented in Table 4.5 are grouped by semantic features into roughly four groups, [+inner state] with twelve of the twenty-one cases; [+quality] with five cases; [-concrete] with three cases; and one miscellaneous item, **poó** *wind*, which may well be a member of [-concrete], too.

TABLE 4.4: INTERSECTION IN THE PREDICATIONS

Adjunct Type:	pingí *do*	kaengé *feel*	lengé *utter*	píngi *hit*	nyíngi *get*	síngi *hear*	nengé *eat*	palengé *lie*	mandengé *bear*	miníngi *hold*	tengé *burn*	singí *carry*
1. [+inner state]												
auú *like, love*	x	x	x									
élya/yála *shame*	x	x			x							
ímbu *anger*	x	x										
enapóti *hot*	x	x										
kéndá *heavy*	x	x										
kóndo *pity*	x	x	x									
kekéná *fed up*	x	x										
kípa *like*	x	x										
lemongotí *sleepy*	x	x										
myúku *nausea*	x	x										
páka *fear*	x	x										
tandá *pain*	x				x		x					
2. [-concrete]												
yaŕná *ill, sick*					x		x					
mána *manner, way*			x		x							
tombó/+máki *boundary*	x			x		x		x				
3. [+event] (?)												
nánga *sharp*				x		x						
waá/páke *steal*					x		x					
angamáe *yawn*									x	x		
topó *buy/sell*				x	x							
wáipa *add on*	x											x
pyángatu nángatu *hiccough*			x	x								
4. [-concrete] (?)												
poó *wind*			x								x	

The most important point to note from the adjuncts appearing in Table 4.5 is the high frequency of [+inner state] adjuncts (i.e. more than 50% of all the cases). This would indicate that a suitable problem for further investigation would be the possible intersections of all other [+inner state] adjuncts.

4.2.3.2 *The Verbs in Intersection*

The verbs presented in Table 4.4 are grouped in order of frequency. The readily observable major point among the verbs is the extremely high degree of intersection between two of the verbs, **pingí** *do* and **kaengé** *be (of emotion)*. **Kaengé** occurs eleven times, and in all of these it intersects with **pingí** *do*; furthermore, the striking fact is that these occurrences are all within the [+inner state] group of adjuncts. We will regard **kaengé** as an essentially meaningless verb, which functions only as the carrier of person-number and tense with [+inner state] adjuncts in those Enga dialects which do not verbalize these.[14] Additional evidence in favour of this view is presented by Draper (n.d. a:44):

66. Nambá máká pi-lya-mó.
I fed.up do-PRES-3SG-DEC
*I am fed up (*lit: *weariness is happening in me).*

66a. Nambá maká-ly-o.
I fed.up-PRES-1SG
I am fed up/weary.

67. Nambá páka pi-ly-a-mó.
I fear do-PRES-3SG-DEC
*I am afraid (*lit.: *fear is happening in me).*

67a. Nambá paká-ly-o.
I fear-PRES-1SG
I am afraid.

Draper calls all of our [+inner state] predications 'Compound Impersonal Verbs' (n.d. a:44), Impersonal Verbs being those in which something happens to a person voluntarily. The Kyaka Impersonal Verbs are often expressed by **pingí** *do* (although as in Enga proper, other verbs are also used, i.e., **lengé**, **píngi** *hit*, etc.). Since we are not able to investigate Kyaka, we will in fact regard **kaengé** as a virtually meaningless verb used in predications with [+inner state] adjuncts (and no others).

4.3 *CONCLUSION*

In the preceding sections we have described the predications of Enga. The question now arises, how can these be accounted for within a generative transformational framework. We have pointed out above (4.0) that the EV classify [+concrete] nouns and the pro-verbs of the predications [-concrete] nouns, and that they are in complementary distribution in this respect. This suggests that we might be able to use the same mechanism to account for both kinds of classificatory verbs in Enga. The only formal difference between the two kinds of verb would then be that the EV is introduced only in certain environments, while the pro-verb of the predication is obligatory in all environments.

In Section 2.3 we have accounted for the insertion of the EV by means of a convention of feature spreading and an agreement rule which transferred the features of the noun onto the predicate node. A reverse feature spreading convention moved these features down to the dummy node where they would be realized phonologically as the correct surface form of the co-occurring EV. We will here posit the same mechanism for the predications, except that in the case of the predications, feature spreading and the insertion of the appropriate pro-verb is obligatory. We can also use feature spreading to account for the small sub-sets of adjuncts which occur only in special grammatical forms (e.g. stative and o-complementizer). This can be accomplished simply by specially marking the adjuncts of these sets[15] with the appropriate grammatical form:

68a. wené

$$\begin{bmatrix} +\text{pya} \\ +\text{STA} \\ -\text{O-COMP} \end{bmatrix}$$

68b. moó

$$\begin{bmatrix} +\text{la} \\ +\text{O-COMP} \\ -\text{STA} \end{bmatrix}$$

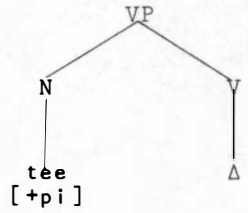
68c. auú

$$\begin{bmatrix} +\text{pi} \\ +\text{STA/+O-COMP} \end{bmatrix}$$

Examples are presented in (69 and 70):

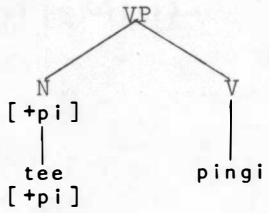
69. Tée pi-ngí
restitution do-HAB
To pay restitution

69a.



restitution

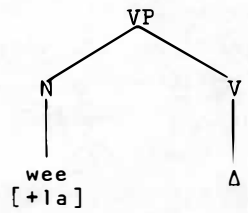
69b.



restitution *do*

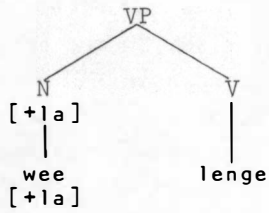
70. weé le-ngé
song utter-HAB
to sing (a song)

70a.



song

70b.



song *utter*

For the Enga predications, the following steps are necessary:

(i) Obligatory insertion of a dummy V node for the predication's pro-verb at the VP node.

(ii) The convention of feature spreading, which duplicates the noun's features onto the dominating NP node.

(iii) A rule of agreement, which copies the features of the dominating NP node onto the dominating VP node.

(iv) The convention of reverse feature spreading, which duplicates the noun's feature from the dominating VP node onto the dummy V node.

(v) The phonological realization of the features at the dummy V node as the appropriate[16] pro-verb.[17]

N O T E S

1. The problems of giving a truly adequate definition of predications is formidable: what features are necessary to distinguish predications from other occurrences of noun (phrase) plus verb, in such relations as object, instrumental, adverbial and so forth. The question is why do the majority of linguists seem to feel that these N + V sequences in NAN languages are somehow special (see 5.2.2.1, Chart 5.2, and the comparative data in Appendix E)? Pawley has stated "in Karam my reasons are (1) that certain nouns always occur accompanied by a verb, and by one and only one verb (in some cases with a very few verbs); (2) that the expressions translate into a single English verb" (personal communication).

2. Although items like *scar, sled, cards, school* and *change* are [+concrete] in English, they are [-concrete] in Enga: e.g. one cannot say *see a school, hit a school* or *chop down a school* using sukúlu; it must be modified and made [+concrete] by the addition of ándá to occur in such sentences; see also 4.2.2.

3. The modifications to follow have also been performed on a number of predications involving different pro-verbs. However, these modificiations differed only trivially from the ones given here and they have, therefore, been omitted.

4. Complex lexical entries (idioms) have not been discussed, however there is a superficial surface structure resemblance between some Enga idioms and the predications. After additional work, this will be presented in a forthcoming article dealing with several of the unresolved problems of the predications.

5. Note that -ly- to -s- is a regular change in the far western Enga dialects.

6. {$^{p}_{mb}$} alternate in certain environments in Enga, as in pumbútí and pupútí *black*.

7. It is striking that these adjuncts verbalized in the eastern Enga dialects appear exclusively in the examples (45-50) in the sensed form, implying in (45) e.g. *I sense he is in pain* or *I sense he is paining*. This problem needs further investigation, as the form with person number and tense seems, at best, questionable:

a. ?*Namba tande-ly-o.
I pain-PRES-1SG
I am in pain, I am paining.

b. ?*Namba kende-ly-o.
I heavy-PRES-1SG
I am heavy.

8. Sáká has a wide range of meaning, including green, healthy, living, mature and (of humans) middle-aged. Sáká may be unique, since we have

c. Talye-ly-á-mo.
yellow-PRES-3SG-AUG
It is yellow.

but not *talya plus a pro-verb, i.e., *yellow* + pro-verb.

9. It will be recalled that $^{+}$ marks loan items and * ungrammatical items. Thus, (59a) and (60a) are grammatical utterances containing loan items, while (54a) and (55a) are ungrammatical.

10. When one considers the amount of verbal negotiation and elaborate speech-making (often in highly metaphoric language) which accompanies almost all of the various payments made by one group of Enga to another, it seems all the more likely that lengé *utter* should, rationally, be a pro-verb for the payment adjuncts.

11. Pawley (personal communication) has noted: "Karam has never borrowed a verb".

12. Pawley has noted a similar phenomenon in Karam:

> It should be noted even though it is the adjunct which carries the more specific meaning, the verb stem is not empty of meaning. There are many adjuncts which can occur with several different verbs, and

the verb stem is what distinguishes them. For example the adjunct sy, which means *illegal(ly)*, occurs with several verb stems:

to steal	sy *illegally*			d- *obtain*
to trespass (by remaining)	sy *illegally*			md- *remain*
to steal food, eat food illegally	sy *illegally*			nŋ *consume*
to commit fornication (of woman)	waŋ *penis*	sy	d *obtain*	aŋ *copulate*
(of a man)	mgn *vagina*	sy	d *obtain*	aŋ *copulate* (1969:30).

13. Note that (63 and 64) have the same meaning, *to steal*, and that it is the adjunct páke which carries the meaning of the predication; we could perhaps postulate that the pro-verbs occurring in the predications are essentially meaningless carriers of the person number and tense (or other) markers. See also note 14 following.

Note also the parrallelism between the pro-verbs of the predications (i.e. virtually meaningless when occurring in the predications, yet occurring independently as meaningful verbs) and the EV (which are only shape/posture markers as EV, yet also occur independently as meaningful verbs).

14. We are here regarding kaengé as *meaningless*, since it does not occur independently (d) as do all other pro-verbs of the predications to (g).

d. *Baa-me kae-ly-a-mo.
he-AG *feel*-PRES-3SG-DEC
He's feeling.

e. Baa-mé le-ly-á-mo.
he-AG *utter*-PRES-3SG-DEC
He's uttering.

f. Baa-mé pí-ly-a-mo.
he-AG *hit*-PRES-3SG-DEC
He's hitting.

g. Baa-mé pi-ly-a-mó.
he-AG *do*-PRES-3SG-DEC
He's doing.

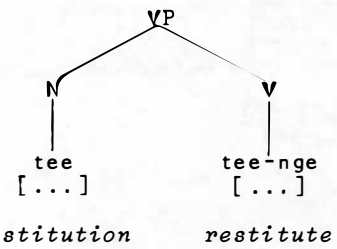
Another solution (i.e., rather than regarding kaengé as 'meaningless') would be to postulate that kaengé is the EV for all [+inner state]

nouns. This has serious consequences, and does not correspond to the data, since the EV classify all the [+concrete] nouns, (and the [+inner state] are assumed to be [-concrete]). Also, since the inner state adjuncts may be verbalized in the eastern Enga dialects (cf. 4.1.6), we would have to postulate that the [+inner state] adjuncts were verbs in two of the Enga dialects, and nouns using the EV in the other dialects.

15. Further work on the sub-sets of adjuncts which appear in the two forms (stative and o-complementizer) will appear in a planned article on these and the compound verbs in contrast to the predications of Enga.

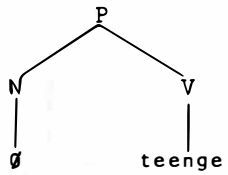
16. As an alternative to the solution proposed in the conclusion, we could assume that both the N and V are present in the deep structure; the following (simplified) tree would result:

h.

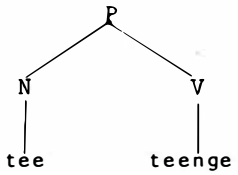


(We will assume here and following that the features of the lexical item are contained in the brackets beneath both the N and the V). The presentation of (g) is typical of cognate object verbs, those in which there is a "high selectivity between a specific V and an 'object' N, and in which the V + N combination in one language might well be matched by a V alone in another" (Fillmore 1968:85). Probably the best known English cognate object verb is *dream a dream*. Fillmore has analysed this such that *dream* may appear as a V alone in its own right (*I dream of Jenny with the light brown hair*), as a cognate object verb (1) (*John dreamed a dream about Mary*), or (2) with *dream* as its representative object and *have* as a pro-verb (*I had a dream*). It is the latter case which most closely corresponds to the Enga predications (since there are no actual occurrences of cognate object verbs as predications in Enga, although these do occur in Asmat and Kamoro, cf. 5.2). In this last case (with the associated pro-verb), the associated N is copied into a dummy F ("factitive", Fillmore 1968: 85), and the associated pro-verb replaces the V. This series of steps is outlined here for the Enga predication, tée pingí *pay restitution for homicide*:

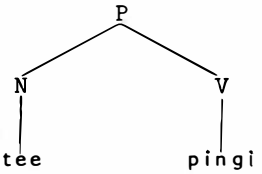
i.



j.



k.



The case that both the N and V are present in the deep structure, seems highly unlikely in Enga, since there are no cognate object verbs or predications, i.e., in none of the data do both the N and the same V appear in the surface structure together. We do not have

l. *tee tee-nge
restitution restitute-HAB

Supplementary evidence for this statement can be adduced from the [+inner state] group of adjuncts, which as stated above may be verbalized in two of the Enga dialects. In the Kyaka and Laiapo dialects (l) is permissible, but must be expressed with the co-occurring pro-verb in the other dialects as (n) (i.e., *not* with a cognate object verb)

m. Tande-ly-á-mo.
pain-PRES-3SG-AUG
It is paining (me) or *I am in pain.*

n. Tándá kae-ly-a-mó.
pain be-PRES-3SG-AUG
It is paining (me) or *I am in pain.*

It is not permissible in Enga to have sentences such as (o)

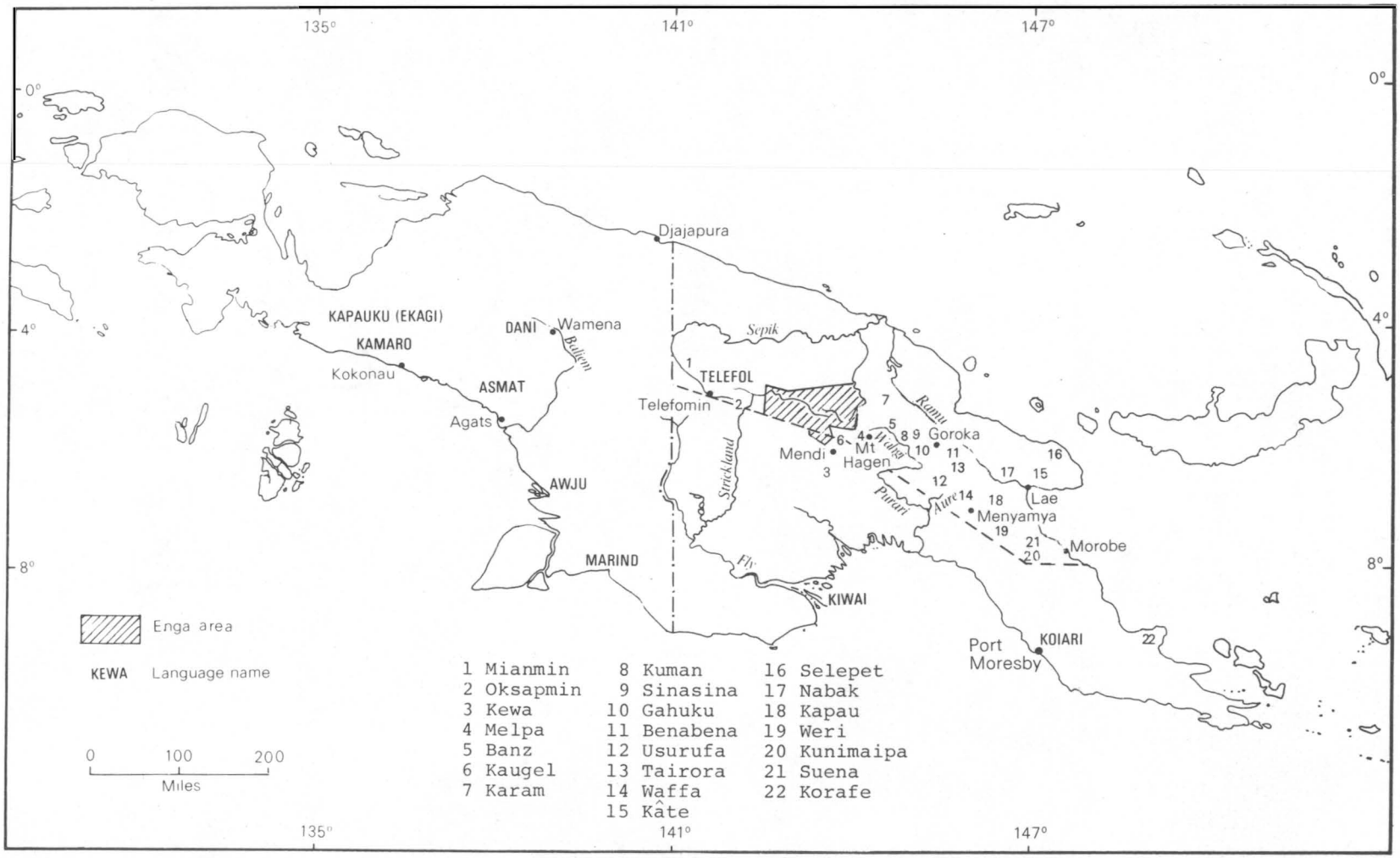
o. *tanda tande-ly-a-mo.
pain pain-PRES-3SG-AUG

This fact, together with the complete lack of any cognate object verbs in the predications, indicates that the chances are remote that the deep structure of Enga contains both the N and the V in the predications.

Instead, as we have seen above (j), the verbs of the predications correspond closely to pro-verbs.

Assumption of the verb only in the deep structure introduces unnecessary complexity into the formation of predications. The steps necessary to derive the complete (surface) predication from a V-only deep structure would parallel the substitution for the pro-verb *have* in *have a dream*, i.e., examples (h) through (j). Indeed, the simplest and most elegant solution is the one suggested in the conclusion above.

17. I would like to thank Dr. John Lynch and Dr. C. L. Voorhoeve for their comments on this chapter.



MAP 2: COMPARATIVE PERSPECTIVE

CHAPTER FIVE

5.0 COMPARATIVE PERSPECTIVE

Enga is a non-Austronesian (or NAN) language of New Guinea. Of this group, Capell has said

> To class two languages as 'Papuan' (to use the older terminology, or as NAN to use the present nomenclature) does not imply that the two are in any way related to each other...there is no NAN family and there was no one NAN mother tongue. So far no genetic classification of NAN languages is possible... (1969:65).

The work of McElhanon and Voorhoeve (1970) presents evidence for possible genetic relationships between the widely-separated Central and South New Guinea Phylum (which would be represented on Map 2 by Kamoro, Asmat, Awju and Marind) and the Finisterre-Huon Phylum (which would be represented on Map 2 by Kâte). The East New Guinea Highlands Phylum (of which Enga is a member) will be seen to lie directly between these two areas.

Having examined the evidence presented above (2.0 and 4.0) for classificatory verbs in Enga, the next step is clearly to determine if these are present in other New Guinea languages. All of the available source materials (mentioned in 0.0) deal with other topics of the New Guinea languages (i.e., such as presenting a descriptive grammar), with the topics we are interested in being mentioned only in passing. The languages used in this chapter were selected on the basis of the availability of materials, so that additional languages as well as additional materials from most of the languages treated here could be added, as available.

The proposed comparative perspective suffers from the lack of in-depth work or analysis on the topic of the verbs by the authors cited below, although some descriptive syntactic work has been done. In regards to both the EV and the Predications, these suffer from the

lack of semantic description or abstraction in the descriptions. In some cases (and especially with the EV), the paucity of the data, the lack of referents and examples all combine to make only the most elementary statements possible (i.e., such that 'There are EV present in language X, but that is all that is known'). The chapter is divided into two sections, presenting the comparative materials on the EV in (4.1), then those for the Predications in (4.2).

5.1 *THE EV*

As described in detail above (2.0), the EV in Enga classify the [+concrete] nouns into classes, usually based upon features of size, shape and posture. In describing the comparative materials, two points should be kept in mind,

(1) What are the typical referents of the EV in these languages, are they also the [+concrete] nouns? and
(2) Upon what kinds of features are the nouns divided into classes?

In the majority of cases, the EV are given only a passing mention in the literature, usually by missionary-linguists concerned with the translation of the English copula; otherwise the EV are mentioned as 'verbs of state' or 'positional verbs'. The languages presented here are arranged in a west to east order, beginning in the western half of West-Irian and proceeding to the Huon Peninsula in Papua New Guinea. For each (as available), we will give a brief verbal description of the EV, the EVs for that language, some typical referents of the EV, and, when possible, the cognate Enga EV.

For Kamoro, Drabbe reports in his description of the language that in the case of 'positional' verbs,[1]

> The problem...is which one to choose in any given case. The choice can depend on the [temporary] position of the verbal subject at the time the action takes place, or it can depend on the [positional] properties ascribed to the verbal subject. In most cases the choice depends on what, in the opinion of the Kamoro people, is the habitual position of the verbal subject. For the Kamoro, all beings fall into [positional] classes, so to say: the sitting, the standing, the floating class, etc. (1953:39).

The EV of Kamoro and some typical referents are:

ame — *stand* (cf. Enga kata-)
people, houses, trees (alone, singular), vertical, high and tall or slender things.

epe *sit* (cf. Enga pita-)
pots, dishes, pans, boats on land, plants, mountains, clouds and celestial bodies.

kai *lie* (cf. Enga sa-)
land, rivers, lakes, fallen trees or wood.

mariki *float*
fish, people in canoes, anything floating on water.

naa *be there, be above*
hanging objects, small things, big masses such as a heap of rice or a pile of sago, things lying on top of something else.

To the east of the Kamoro people live the Asmat. C. L. Voorhoeve reports that they "divide all existing things into...five 'position' classes" (1965:48). The EV of Asmat and some typical referents are:

em *stand* (cf. Kamoro ame above)
men, trees, upright poles, anything that is tall and slender.

ap *sit* (cf. Kamoro epe above)
women, houses, carrying bags, anything that is about as high as it is broad.

amis *lie*
small animals, reptiles, fallen trees, the just-risen sun or moon, anything that is much broader than it is high, or is low to the ground.

se *be in the water*
fishes, canoes, rivers, anything in or on the water.

tep *be above*
flying animals, hanging objects, objects stored away on the rafters of the house, anything that is above eye-level.

Still further to the east are the Kiwai. In his Kiwai grammar, S. H. Ray presents the following EV with typical referents:

otoi *stand*
trees, mountains, food plants

erea *remain, lie*
objects in fixed positions which do not move, "It carries the idea of permanence..." (Ray 1938:60).

orou *lie*
persons or things lying down

omi, orowomi } *stay*
"to be in a place, of persons" (Ray 1938:61).

Kamoro, Asmat, and Kiwai are all along the South Coast of Papua New Guinea. As one moves north from the Kiwai into the Southern Highlands, one encounters the Huli (Slightly to the west of Mendi on Map 2). The Huli EV have been described by Rule[2] who gives, firstly, more data on the EV than one usually encounters, and, secondly, a preliminary analysis of the EV as class markers. Rule points out that

> ...the three verbs ka, bira and ngela constitute the nearest equivalent of the verb "to be" in English. All nouns take one of these three verbs, and it is therefore necessary to divide all nouns into three classes according to which particular verb they take... (1954:32).

The three EV and typical referents are:

ka *stand* (cognate to Enga kata-)
men, boys, male relatives, pigs, dogs, and other large animals, trees and all kinds of plants, houses and all things which have their roots in the ground, parts of the body.

beda *sit* (cognate to Enga pita-)
women, girls, female relatives, birds, still water, squirrels,[3] insects.

nga *put* (? cognate to Enga sa-)
all inanimate objects which have simply been placed on the ground, snakes, reptiles and all creeping things which crawl along the ground.

These referents which Rule presents for Huli are strikingly similar to those presented for Enga in (2.0). A further correspondence is mentioned by Rule:

> It should be noted that if a man is known to be seated, then beda is used, and similarly, if a woman is known to be actually standing, then ka is used. It is only when they are not known to be either standing or sitting, that the above distinctions are made (1954:33).

(Cf. this statement with (2.1), examples (10) through (13).

To the east of the Enga but still in the Western Highlands are the Melpa. Strauss reports that there is no equivalent to the European 'be' verbs in Melpa. Instead, Melpa uses "constructions with verbs that take the place of European be verbs" (1955:9). The EV used are:

mogla	*live, be there*
aŋkela	*stand*
pea	*lie* (animate
tea	*lie* (inanimate)[4]

Strauss gives two examples of change-of-state (cf. 2.2.6 above) involving water and sweet potatoes. The Hageners regard water as animate (cf. 3.0 above), so that the statement *There is a water pail there* may be expressed by example (1) or (2):

1. No pake ti teetem. (uses tea *lie* (of inanimates))
2. No pake ti morom. (uses mogla *be there* (of animates))

In the case of (1), the implication is that the water pail is empty, and in (2), it is full (i.e. with the animate water). The examples for sweet potatoes are similar:

3. Oka teetem (uses tea *lie* (of inanimates))
4. Oka peetem (uses pea *lie* (of animates))

The meaning of both (3) and (4) is *There are sweet potatoes there*, but (3) implies that the sweet potatoes have been taken from the ground and are lying ready to be cooked and eaten, while (4) implies that the sweet potatoes are still 'animate', i.e., alive in the garden.

The Banz and Sinasina languages to the east of Melpa also have EV. L. J. Luzbetak notes that in the Banz language a

> non-native speaker often finds it difficult to decide whether he should in a given case say mem, tem or pam. All three verbs mean more or less the same, *sc., he, she, it is*. However, the three words may not be used indiscriminately (1954:159).

The EV of Banz with Luzbetak's definitions are:

mem	*is* (in the sense of apposition or identity, and in the sense of *is present*).
tem	*put* (Connotes possession, and refers to a temporary presence of impersonal objects).
pam	*exists, rests* (Connotes a permanent state of being).

Some of the typical referents (as extracted from Luzbetak's text) are:

mem	(bird, stomach, bottle, cassowary, tree, dog, pig fence, lizard, cockatoo, patrol officer)
tem	(book, river, axe, rat hole, eggs, places, road)

pam (fire, work, earth, sun, name, nose, mouth, word, car).[5]

The EV of Sinasina are presented in a similar manner by McVinney and Luzbetak, with the same introductory statement that the EV may not be used "indiscriminately" (1954:153). The four EV of Sinasina are

moŋwa *is* (cf. Melpa mogla *live*)
(used with animate beings and the word for water; in the sense of apposition or identity, and in the sense of *is present*).

yoŋwa *put*
(Connotes possession and refers to a temporary presence of inanimate objects).

paŋwa *exists, rests*
(Connotes a permanent state of being).

duŋwa *says*
(inanimate objects and used to state a fact).

As one moves from the Eastern Highlands to the North Coast of New Guinea, one encounters the Kâte. Schneuker, in his short handbook of Kâte, makes the statement which we have come to expect for the EV:

> ...there are constructions with verbs that take the place of the European *be* verbs... The verbs used are ju, fo, ŋe and doma. The native concept of whether the person or article under consideration is living, lying, sitting, or standing determines which of the four verbs is to be used in a given situation (1962: 10).

The Kâte EV and some of their referents (drawn both from Schneuker (1962) and Pilhofer (1953)) are:

ju *living*
(man, boy)

fo *lying, sleeping*
(river, coconuts, wine, pen, bananas, sweet potato, knife, wire, boards)

e *sitting*
(village, places, bird, car, bottle, house, woman, mountain; said of short, wide objects)

doma *stand*
(coconut palm, lamp; said of long objects)

Thus, it can be shown that EV can be found in NAN languages from all parts of the mainland of New Guinea.

5.1.2 Discussion of the Comparative EV

The data presented in 5.1.1 are summarized and presented in Chart 5.1. The languages are again listed from west to east, including Enga. At the onset of the comparative description, two main questions were listed for note, and the results are presented here. Firstly, that, in all cases in which referents were available for the EV given, *none* of these were [-concrete] nouns. Since we have shown that in Enga the EV co-occur only with [+concrete] nouns, the possibility strongly suggests itself that the EV of these languages may also act as classificatory verbs, in terms of the [+concrete] nouns, at least. Needed to make this a tenable hypothesis is much additional data on the EV of other NAN languages, as the present paucity of data is the major limiting factor of such a study.

Secondly, we were interested in the types of features which would be used to divide the noun classes. In the EV data as presented above, features of shape ('long objects','short, broad objects') and posture ('standing', 'lying') are recurrent, just as these are the main features of the Enga EV. Kamoro and Asmat also correspond with Enga in two of the EV, each having an EV for 'aquatic, floating', and an EV for 'hanging, lying above'. The one spot of Chart 5.1 which is most notably different is that for the EV of the Melpa-Banz-Sinasina group of languages: this group of languages all share EV which are different from the other languages in the respect that, while the EV of other languages are based on features of shape and posture, these seem instead to be based upon features of animate versus inanimate and permanent versus impermanent. The materials available clearly indicate that these are EV; the possible historical causes for this difference in type of features of the EV would be an interesting conjecture, but the present lack of data and analysis prevent us from exploring this as a problem.

In conclusion, we have determined that EV do exist in other NAN languages,[6] and that the EV features most frequently are based (as in Enga) on shape and posture. Furthermore, the likelihood seems good that the EV found in other languages co-occur with [+concrete] nouns, possibly as classificatory verbs like the Enga EV.

CHART 5.1: THE COMPARATIVE EV

Kamoro	Asmat	Kiwai	Huli	Enga	Melpa	Banz	Sinasina	Kâte	Gloss
mariki	se	erea, omi	nga	sa-	tea	tem	yoŋwa		*stay*
ame	em	otoi	ka	kata-	aŋkela			doma	*stand*
kai	amis	orou		pala-	pea	pam	paŋwa	fo	*lie*
epe	ap		beda	pita-				ŋe	*sit*
naa	tep			lya-					*hang*
eri				ipa-					*come*
					mogla	mem	moŋwa	ju	*live*
							duŋwa		*state a fact*

5.2 *THE PREDICATIONS*

As described above (4.0) in detail, the Enga predications are formed of an adjunct co-occurring with a pro-verb. In contrast to the comparative materials on the EV, the predications have been mentioned in more detail in the literature (Bee 1973, P. Healey 1965 and Pawley 1969); they are given a variety of names: primary verbs, periphrastic verbs, auxiliary verbs, complex verbs, verb phrases, verb compact, and nuclear verbs, to mention a few.

In the following sections we will firstly give a brief verbal description of the phenomena, then a comparison of the verbs used in the predications, and finally, some specific examples of types of predications. The body of data used in this section on the comparative predications was too large for inclusion in the main text as it was felt to be of minor interest to many readers, and so it is presented in full in Appendix E.

5.2.1 The Phenomenon

The following material will be presented in roughly the order of nearness of relationship to Enga. To the south of Enga, Franklin has stated that Kewa has at least two types of verb phrase which might be termed periphrastic verbs, and he also notes "none of the verb phrases are exactly parallelled (*except in the semantic or total meaning sense*) with those of either Young or Healey" (1969:167 emphasis mine). East of Enga, in the Melpa language near Mt. Hagen Ross has noted that one verb, *hit, strike, affect*, when used in combination with nouns, adjectives, and verbs, has over a hundred different meanings; he also presents six other verbs which are used in Enga-type predications (Ross 1946:41f.). In the Banz language of the Wahgi Valley, Luzbetak mentions the paucity of independent verbs and the "great abundance of idiomatic verbal expressions composed of a frequently occurring verb joined to another verb, a noun, adjective, or another part of speech ... We find a small number of verbs...which occur again and again, each time with a different meaning, depending on the combination we find them in" (1954:136).[7] Nilles (1969) for Kuman, and McVinney and Luzbetak (1954) for Sinasina make similar statements for their respective languages. For Benabena, Young (1964) states that the periphrastic verb complex accounts for more than 50 per cent of all verb constructions in text; this is defined as a "verb complex consisting of a free-form word of specific verbal implication in close knit sequence with a fully inflected nuclear verb, which together have a unique semantic content" (1964:78).

Bee (1973) discusses idiom-type verb phrases for Usarufa, which have "restricted co-occurrence potential of constituent words and a limited degree of productivity." (287) "...only a few verbs are potential fillers of the verb slot... The more common ones...account for about two-thirds of the verbal idioms" (1973:291). Pawley states that "Karam has only a small number of verb stems (about 100 in all) ... In spite of this very restricted range of verbs, with very general meanings, the Karam manage to talk about much the same range of quite specific events as English speakers. They do this by attaching to each verb an adjunct or adjuncts which contain specific information not in the verb stem" (1969:28).

In the Binandere languages, Wilson states that Binandere itself forms 'compound verbs' with the auxiliary verb ari *to do*; he adds that Mailander set up five verb classes in Zia, four of them based on the fact that they took different auxiliary verbs, and that this could also be done for Suena (Wilson 1969:104). For Kapau, Oates and Oates describe the noun-verb verb phrase as a very common one which is not close-knit structurally since the noun may be separated from the verb by object, adverb and other things, but as one which is close-knit semantically (1968:36f.).

Pilhofer (1933) describes the 'primary verbs' of Kâte, of which ke *do* is again the most frequent. P. Healey in her article on Telefol Verb Phrases (1965) describes the auxiliary verbs, a small group which commonly occur with verbal adjuncts. Most of the adjuncts occur with only one of these auxiliary verbs; although the verbs normally have distinctive meanings when they occur alone, when used in these complex verbs they may have "virtually no semantic significance when they occur with an Adjunct... Their function is as carrier of aspect, tense, subject person-number, and other suffixes" (1965:30).

In both the Flamingo Bay (Voorhoeve 1965) and Ajam (Drabbe 1959) dialects of Asmat, "verbal expressions of which the first part is nominal and the second verbal" (Drabbe 1959:25) express many actions and situations not expressed by a verb; in "some cases both parts are entirely alike or similar to each other..." (Drabbe 1959:25). It is Asmat which has 'cognate-object' constructions which must express certain predications with a specific V and specific 'object':

5. mbetsj mbetsj-
   weep *weep*
   to cry (lit. *to weep a weep*)

6. mbui mbui-
bath bathe
to bathe (lit. *to bathe a bath*)

Finally, in Kapauku (Ekagi) we find auxiliary verbs, of which Drabbe gives as the main one tai *do* (1952:43). The following section presents an overview of both the languages and the major verbs used in these phenomena.

5.2.2 Comparison

Chart 5.2 presents a matrix diagram. Languages used are given in the columns and grouped geographically from west to east. The rows present the verbs used in the predications in the various languages. In all cases this information (i.e., as to which verbs are used) is based upon the original sources for that language; the subsequent ordering of the most frequently occurring row/verb to the top is based on this information. While in most cases the authors give the most frequently occurring verb as *do*, which compares favourably with the matrix of Chart 5.2, the one exception is Ross for Melpa, who gives *hit* as the most frequent (in both text and examples). The point is that Chart 5.2 presents the order of frequency based upon the occurrence of that verb (*do*) in all the languages, not the *frequency* of occurrences of that verb, which in some cases is different. (Cf. Table 4.1.3, on the frequency of the verbs in predications, in which *utter* is most frequent).

The Chart speaks for itself, but a few points will be noted. The first is simply the occurrences of the two most used of the verbs, *do* and *utter*, which are present in all but two (*do*) and all but four (*utter*) of the languages. Also, the high frequency of *hit* will merit later consideration in comparison to English. The second point of interest is the occurrence in Enga of kaengé *be* (of inner states) which has been discussed above in various sections (4.1.4 and 4.2.3) as a problem case; in all the other languages examined, no similar verb (either as *be* or as *be of inner state*) was discovered.

5.2.3 Examples

In the following section we will present some examples drawn from the comparative materials on predications. Three topics will be discussed:

(i) bodily processes, chosen since they would occur in most of the data, and thus, as a typical semantic domain of the predications;

CHART 5.2 (Part I)

Gloss	Asmat	Miamin	Telefol	Oksapmin	Kewa	Enga	Kaugel	Melpa	Banz	Karam	Kuman	Sinasina
1. *do, make*	e-	kemin	keemin	hapaat	pa-	pi-	te	e-	ere	g-	ele	el
2. *utter*	ji-	galin	akan'-kalin	aripaat, porpaat	la-	la-		ne-	ŋe	ag-	di	di
3. *hit*	af-				ta-	pya-	to	ro-	ro/to	pk-	si	si
4. *get, take*					mea-(?)	nya-			tse/kelle	d-	i/yo	i
5. *eat*	an-		unang'-kalin		na-	na-		no-	no	ñŋ-	ne	ne
6. *see*	por-					kanda-					de/kan	de
7. *go*	at-	unemin				pu-		po-		am-	o-	
8. *know*						masa-			pile	nŋ-	pri	pil
9. *come*						ipa-		o-		ap-	u	
10. *put*						seta-			teye		yo	ye
11. *die*						kuma-	kolo		gollo		gogl	gol
12. *give*						mai-/di-		nj-			ti/to	te
13. *others*												

CHART 5.2 (Part II)

Gloss	Gahuku	Benabena	Usarufa	Tairora	Waffa	Kâte	Selepet	Nabak	Kapau	Weri	Kunimaipa	Suena	Korafe
1. *do, make*	velekava(?)	i	o-		kiaa/iikia	ke	oap, tuhhap	mi		yai	ta, vata	wai	ari
2. *utter*			te-	ti	kia	mu	yap	ku	i-	ya		sai	sari
3. *hit*	nepelekave(?)	ho		ari					t-/ti-	yamiŋk			
4. *get, take*		li	maya-			lo			gi-				
5. *eat*										yen	na		
6. *see*					taa	hone	ek		n-			gai	
7. *go*	zekave(?)		wo-		kua/pikiaa	ga				yes			
8. *know*									u-				
9. *come*	hizekave(?)				ngia				mti-		ema	mai	
10. *put*													
11. *die*													
12. *give*				mi									
13. *others*	vizekave *is(?)*					mana *hear*							

(ii) the domain of inner state, since we found no occurrence of a verb similar to the Enga kaengé in any of the other data on predications, and this domain has been mentioned above in connection with various problems (4.1.4 and 4.2.3);

(iii) anomalies, which we would expect to find in any semantic description, and which are of interest here in connection with the general topic of exceptions.

(i) Bodily Process

This domain was selected as one likely to be present in all languages. Examples of one process are presented below; the English gloss for all would be *to urinate*.[8]

7. puú te-ngé. (Enga)
   urine burn-HAB

8. pu ro-num. (Melpa)
   urine hit

9. poll to- (Banz)
   urine hit

10. awima te- (Usarufa)
    urine say

11. ss ky- (Karam)
    urine excrete

12. i api- (Asmat)
    urine urinate

13. jiti ti- (Awju)
    urine urinate

The variation in verbs used in the predication is notable: *burn, hit, say, fall,* and *urinate*.

(ii) Inner State

This area was chosen for comparison because of Enga kaengé *be of inner states*, which we did not find present in any of the other languages. Instead, many of the [+inner state] items/adjuncts are expressed via the verb *do*. This would correspond well to the fact noted in 4.2.3 that kaengé intersects most frequently with pingí *do* in the Enga [+inner state] adjuncts. Other verbs also used with such adjuncts include *hit* and *say*, recalling 4.2.1 and the discussion of the different verbs permitted by the semantic rules to co-occur with

[+inner state] in Enga, i.e., kaengé, pingí, píngi *hit*, lenge *utter*, and síngi *hear*. Clearly, the [+inner state] adjuncts are a problem case and need further investigation. Some examples from this domain are:

14. kae enem (Melpa)
good do
it is good

15. pipil enem (Melpa)
shame do
be/feel ashamed

16. imbil ere (Banz)
pain do
have pain

17. gi ul si (Sinasina)
pain hit
have pain

18. nabŋ g- (Karam)
shame do
be ashamed/shy

19. omar e- (Asmat--Ajam dialect)
do
be afraid

20. manam af- (Asmat--Flamingo Bay dialect)
hit
like/love

21. ura di (Sinasina)
soft say
be soft

(iii) Anomalies

The anomalies are of interest as exceptions to the postulated semantic redundancy rules. The case is such that if Enga has a predication of the form 'adjunct X plus co-occurring verb *utter*' and we assume that *utter* has a similar semantic content in the other NAN languages discussed above, then we would assume that adjunct X of that language would also co-occur in the predication with *utter*. If it instead co-occurs with *do* (i.e., is anomalous), then it is of interest to us for its content, the semantic features of the adjunct X, and the two verbs *utter* and the anomalous verb.

A few examples of anomalies in the predications in regard to *utter* are presented from the source data. In Usarufa we have:

22. ibiga yara-
a cry to weep
to cry

23. akuga ita-
odour to hear
to smell

(22) contrasts with Banz's

24. tow'll ere
laugh do
to laugh

which contrasts with Enga's

25. gií le-ngé
laugh utter-HAB

It would seem that (22) and (23) would use *utter* (as Enga does); (but Enga also has

25a. gií kaengé
laugh feel-HAB
to laugh).

In Banz we also find

26. wii ro
call hit
to call

when we would also expect *utter*. Another anomaly from Enga is

27. yandá pi-ngí
bow do-HAB
to fight

This was expected to be

28. *yandá pí-ngi
bow hit-HAB

5.3 *CONCLUSION*

We have noted that the comparative perspective for other NAN languages indicates the presence of both EV and predications. The EV (from the referents given) co-occur with [+concrete] nouns, and the

majority have the same type of features, shape and posture, with the Melpa-Banz-Sinasina group differing in feature types in the EV. The predications have received more attention in the literature and much more data are available on them (cf. Appendix E); again, the languages investigated show striking similarities. It would thus seem that covert classificatory verbs are present in many of the NAN languages. Of the total nine languages with EV, seven of these also have predications (Enga, Asmat, Kamoro, Melpa, Banz, Sinasina, and Kâte). Of the twenty-five languages with predications (seven with EV), we know that only one (Karam) does *not* have EV. Clearly the next step is to more thoroughly investigate these languages for EV.[9]

NOTES

1. With thanks to Dr. C. L. Voorhoeve for the English translation; the actual Dutch text is:

> Bij het gebruiken van deze hulpwerkwoorden komt de kwestie, welk werkwoord uit de reeks men in een gegeven geval moet nemen. De keuze kan afhangen van de houding waarin het onderwerp zich op het ogenblik der handeling bevindt of van de toegeschreven toestand, eigenschap enz. van het onderwerp. Veelal hangt ze af van de houding waarin het onderwerp zich gewoonlijk, volgens de Kamorose opvatting, bevindt. De Kamorose verbeelding veerdeelt a.h.w. alle wezens in klassen: de zittende, de staande, de drijvende, enz., zie de volgende nummers (Drabbe 1953:39).

2. I am indebted to Professor S. A. Wurm for making available the unpublished materials of M. Rule on Huli.

3. It seems likely that the class referred to here is actually something like the Enga game mammals.

4. Some additional referents for Melpa EV have been provided by Professor A. J. Strathern, who gives the following:

mo- cassowary, birds, penis, testicles, vagina, breasts, skin, arms, fire, water, lake, stream, sun, frogs, beard, hair, wasp, bee, house, tree, fence, fish (?), furniture (?).

an- mountains (?), houses (?).

pe- fruit, seeds, plants, mushrooms, heart, any animate that is in a place, habitat, liver (?), nails (?).

te- lizards, snakes, cars, cut wood, books, bucket, centipedes, crawling animates, dead animates, harvested sweet potatoes.

5. Some additional referents for Banz EV have been provided by Dr. Marie Reay, who gives the following:

mem men, women, pigs, water, fire, lake, stream, nuts, fruits, flowers, dead people (?).

pam used for duration of being.

tim buckets, cars, frogs, house, mountains, trees (?), snakes, centipedes.

baim (*be there/present*); house, fence, firewood, any improvements made by human effort.

6. Some other languages in which EV have been noted include:

Dani, which has "a number of verbs, all of them denoting some kind of being..." (Van der Stap 1966:126f.). These include menasin *to stand*, welasin *to lie*, belasin *to fall*, akasin *to be*, and welakasin *to stay, to exist*.

Kaugel, a language located to the west of Mt. Hagen township (i.e., between Enga and Melpa): molo- *be*, agili *stand*, pe-*lay*, and le- *place* (Blowers 1970:39).

Koiari, which does not have EV, has a system of specifiers (cf. Dutton 1969:223-241), which might well be remnants of EV. These specifiers group the nouns into classes and it is possible that they derive historically from EV. They must be inserted transformationally and under conditions similar to those where the EV in Enga is introduced.

Franklin (1971) also states:

> The verb expounding the Predicate tagmeme in complementive clauses can often be recognised as a form of the verb *to be* which is based, e.g. upon such verbs as: pĺra *to sit*, sá *to put*, aa *to stand* ya *to affirm*.

Irwin, in his discussion of *to be* in *Salt-Yui*, notes that all animate and inanimate nouns take the single form mol (1971:69). Vincent gives examples of *Tairora* vata *put, have*, which seems to act as an EV of inalienable possession, in examples such as:

a. taaka vukai mari vata-a-ra.
*casuarina long leaves has-a-*relator
A casuarina has long leaves.

b. te tave vata-#-uka.
*I hat have-a-*relator
I am a chief.

and compare (b) with (c)

c. **te tave vata-ura-uka.**
I hat have-I-past-focus/relator
I had a hat. (Vincent 1973).

7. A. Pawley (personal communication) has pointed out that both Ross and Luzbetak "fall into the linguocentric error of ascribing different meanings to a verb when it occurs in different predications, when in fact the verb is constant in meaning and it is the adjuncts which are the variables."

8. This particular example was selected since it was actually present in the source data; cf. Appendix E.

9. It would seem very likely (considering the nearness of relationship with Enga) that Huli has both EV and predications.

Some additional languages with predications are: Awju and Marind from brief examples given in Boelaars (1950:15f. and 75f.).

CHAPTER SIX

6.0 CONCLUSION

In this monograph the semantics of a portion of the verb system of a New Guinean language has been described and explored. Focus was upon two kinds of classificatory verbs, the existential verbs and the pro-verbs of the predications, which were shown to be mutually exclusive in regards to co-occurring nouns. A sub-set of nouns which co-occur with the EV, the animates, was also analyzed. The semantic features and semantic redundancy rules for the EV, the animate nouns, and the predications were described. Considerable emphasis has been given to the analysis of exceptions and semantic irregularities to determine whether there were systematic regularities and where possible, to formulate rules to account for these.

Several points of general interest were discussed: possible support for Lyons' hypothesis of the derivation of all existential and possessive sentences (in Enga, sentences with the EV) from indefinite locatives was presented in 2.2.1. Covert features as semantic markers were presented in 3.1.2 for the animates. 'Feature spreading' was presented as a solution to the problem of predicate nouns and EV conflict resolution in 2.3. Possible support for the priority of semantics over syntax was briefly presented in 3.4, in the discussion of the nature of the deep structure of Enga predications. The verbs of the Enga predications were discussed as cognate object verbs, and as pro-verbs, similar to various English 'auxiliary' verbs, such as *have*, *do*, *get*, etc. Wider implications here are that the EV are based upon features of shape and posture, such as those mentioned by Friedrich (1970) and Berlin (1968) as having world-wide significance in terms of semantic universals.

In relation to Papua New Guinea linguistics, chapter five presented the comparative materials from other languages for the EV and the

predications. It was shown that both the EV and the predications could be used as a diagnostic criterion for a large number of NAN languages and the importance for questions of common origin and subgrouping.

Thus, although a preliminary semantic investigation, this study has provided some materials of interest to not only Papua New Guinea linguistics, but also of general interest as well.

APPENDIX A: SEMANTIC CLASSES OF VERBS

The semantic classification presented below is based upon informants' statements of similarity (primarily via synonym-type definitions), which provided one means of determining semantic classes. Further support for the classification derives from the matched co-occurrences of nouns and verbs produced and displayed in matrix form by the computer discussed in A-8. The semantic classes of verbs are

A-1 Verbs of Effect
  (a) Activity
  (b) Cutting/Breaking
  (c) Holding
A-2 Verbs of Motion
A-3 Verbs of Position
A-4 Verbs denoting Inner States
A-5 Verbs of Bodily Activities/Processes
A-6 Verbs of Payments
A-7 Verbs of Existence

A-1 VERBS OF EFFECT

(a) Activity

Verbs of effect are those which denote activity, especially activity which results in a change of state. These verbs are [+activity], and the class is composed almost entirely of 'ordinary' verbs. Some members of this class are yangengé *cook in ashes/on stove*; yawengé *steam in earth oven*; pokengé *plant a garden*; wasingí *make, create, fix, repair*; eténge *complete, finish*; lumbingí *open*; támbenge *shell (nuts, coffee, etc.)*; and tamungí *rot*. All members of this class, whose activity results in a change of state, may be expressed via the Enga stative form:

1. Mapú yange-ly-á-mo.
sweet.potato cook-PRES-3SG-AUG
He is cooking sweet potato.

1a. Mapú yangá-pae dóko
sweet.potato cook-sta *the*
The cooked sweet potato

2. Eé dóko poke-ly-á-mo.
garden the plant-PRES-3SG-AUG
He is planting the garden.

2a. Eé poká-pae dóko
garden plant-STA *the*
The planted garden

(b) Cutting and Breaking

Verbs of cutting and breaking have the characteristics of verbs of effect (i.e., denote activity which results in a change of state and may be expressed via the stative form); the reason they are presented here as a sub-class is because of the Enga specification of cutting (i.e., as to the direction of the cutting in relation to the grain, (lengthwise and crosswise) and to the instrument used for the cutting (axe, knife, etc.)) and breaking (i.e., as to the original size of the object broken (large, small, etc.) and the amount broken in relation to this). Some members of this class are: konjíngi *to cut across the grain, esp. with a knife*; tokengé *to cut to a point, sharpen*; waíngi *to cut lengthwise, usually with an axe*; képenge *to cut against the grain, esp. with a knife*; tukíngi *to break off* (a medium sized object); lolénge *to break in two*; pongengé *to break off a part (of a larger whole)*. Examples of this sub-class are:

3. Mapú konjá-pae dóko
sweet.potato cut-STA *the*
The cut sweet potato

4. Wáingi pongá-pae dóko
branch break-STA *the*
The broken branch

(c) Holding

Verbs of holding also have the characteristics of verbs of effect in denoting an activity which results in a change of state and may be expressed via the stative form; they also are presented here because of the Enga specifications regarding the various ways of holding (in

the hand, in the arms, on the shoulders, over the shoulder, in a net-bag, etc.). Some members of this sub-class are: minínge *to hold in the hands*; kupinyínge *to hold in the arms*; kapusínge *to hold between the teeth*; aúsinge *to carry on the shoulders (of a child)*; mandengé *to carry in a net-bag*; singí *to carry on shoulders*. Examples of these are:

5. Mapú mandí-pae dóko
   sweet.potato carry-STA *the*
   The carried sweet potato

6. Mapú miná-pae dóko
   sweet.potato hold-STA *the*
   The held sweet potato

A-2 VERBS OF MOTION

This class contains members marked [+motion]; the members of this class may be used in the stative form, but this very rarely occurs.

7. ?Akáli pú-pae dóko
   man go-sta *the*
   ?The gone man

Some items are: pengé *go*; epengé *come*; watengé *to follow, chase*; kisínge *to climb*. Various direction suffixes may be added to bases of this group to indicate the direction of the motion: -a- *nearby*; -o- *further away*; -n- *down*; -m- *level*; -ly- *up* etc. A base such as kolondénge *to enter* may thus be modified to kolandénge *to enter nearby*.

A-3 VERBS OF POSITION

Members of this class are [-motion]. Members of this class, in contrast to those marked [+motion], may often occur in the stative form. Some members of this class are katengé *stand*; petengé *sit*; palengé *lie (inside)*.

8. Mapú palí-pae dóko
   sweet.potato lie-STA *the*
   The lying sweet potato (or *The sweet potato inside*)

9. Akáli pití-pae dóko
   man sit-STA *the*
   The sitting man

A-4 VERBS OF INNER STATES

The major characteristic of verbs of this class is the feature [+internal]. [+internal] implies to the Enga that members of this set are not available for verification visually/externally

10. Baá ímbu kayá-l-u-mu.
he anger be-PRES-3SG-SENSE
He is angry.

This statement could be made only after the subject had perhaps beaten his wife (which thus showed his anger externally). Verbs of this set often appear in the sensed and deduced forms

11. ímbu py-ú-mu.
anger do-PRES-3SG-SENSE
He seems to be angry.

12. ímbu kae-ly-a-mé lámo.
anger be-PRES-3SG-AUG DEDUC
He is evidently angry.

but may appear in the non-sensed form only in the first persons, a further indication that the speaker must be reporting on his internal state.

Members of this set almost always appear in the form of a predication (cf. Chapter Four in the main body of the monograph); the proverb is frequently kaengé *be (of inner states)*. (The Kyaka and Laiapo dialects verbalize the adjunct directly and do not used kaengé.)

Some members of this set are ímbu kaengé *be angry*; máká kaengé *be tired of someone/something*; páka kaengé *be afraid*; kóndó kaengé *have pity (on someone)*; auú kaengé *like/love* tálo kaengé *be hungry* nánú kaengé *be thirsty* kéndá kaengé *be sad* and gií kaengé *laugh*.

13. Nabá páka kae-ly-ó.
I fear be-PRES-1SG
I am afraid.

14. Nabá pakaé-ly-o.
I fear-PRES-1SG
I am afraid. (Laiapo dialect)

A-5 VERBS OF BODILY ACTIVITIES/PROCESSES

Verbs of this class are [+external], and typical members are ée lengé *cry*; sambó lengé *lie/tell falsehood*; puú tengé *urinate*; tókó lengé *explode/thunder*.

15. Namba-(mé) ée lé-ly-o.
I-(AG) *cry utter*-PRES-1SG
I am crying.

16. Namba-mé wáné méndé mandé-ly-o.
I-AG *child a bear*-PRES-1SG
I am giving birth to a child.

A-6 VERBS OF PAYMENTS

Birth, death and marriage payments play a large part in Enga culture, as do gifts of various kinds. The verb *give* is marked for pronominal reference

17. Namba-mé émba mená méndé dí-ly-o.
I-AG *you pig a give*-PRES-1SG
I am giving you a pig.

18. Namba-mé baá mená méndé maí-ly-o.
I-AG *him pig a give*-PRES-1SG
I am giving him a pig.

Some typical members of this class are tée pingi *death payment* (among western Enga), *pig exchange* (among eastern Enga); laitá pingí *payment for injury*; keé lengé *bride payment* betá píngi *pay restitution/compensation*; kepá síngi *restitution paid for killing* (made in pig quarters); pandétá pingí *payment at death of child made to wife's patriline by father's*; taá díngi/maíngi *payment made as restitution for theft*; wáta pingí *marriage payment of bride's family to groom's*; saándi píngi *to give with expectation of return with interest.*

19. Ípane dúpa-me betá pi-ly-amí-no.
Ipane the-AG *restitution hit*-PRES-3PL-AUG
The Ipanes are paying restitution.

A-7 VERBS OF EXISTENCE

These have been discussed in detail in Chapter Two.

A-8 THE MATRIX

Co-occurrence relations between approximately 250 (generic) nouns of all classes and 40 verbs (excluding predications) were elicited during the second field trip. These were coded directly onto data processing forms for the computer, which then produced and displayed in a matrix form the relations between (1) the nouns and verbs, (2) the 250 nouns against each other (i.e., a matrix 250 by 250 items),

and (3) the 40 verbs against each other (i.e., a matrix 40 by 40). The information obtained from this study, as well as the original materials of elicitation, have not been fully analyzed at present because of time limitations, but promise further verification of the work on classificatory verbs and noun classes, with present evidence that the concrete nouns of the matrices group themselves together (in co-occurrence relations with the verbs) and even, possibly, subgrouping themselves into the semantic domains (i.e., artifacts tend to co-occur with certain verbs, while animates co-occur with others, etc.).

The ideal for this study would be to compose a matrix of all nouns (3,000) crossed with all verbs (1,721), but the matrix resulting would be so formidable (as well as having such low correlations in many parts), that the above smaller study was undertaken instead to discover if such a larger matrix would be worthwhile (also, if possible to process by computer, as 3,000 items crossed would require a large amount of computer storage space).

APPENDIX B: DATA COMPILATION

B-1 INFORMANTS

All informants used in the study were native speakers of the Kopetesa (Torename) dialect of Enga, a western Enga dialect spoken about twenty miles from Laiagam (see Map, page 21). All were monolingual in Enga (except as noted below), and all elicitation was conducted in Enga.

My first principal informant, Councillor Alua Walyisa was an illiterate man of about twenty-five years, and was bilingual in (Neo-Melanesian) Pidgin. My second principal informant was Pesatusa Waelisa, an illiterate man of about twenty-three years. Other informants included Pasone, a young (illiterate) woman of about sixteen years; Pisini, a semi-literate woman of about twenty years (and one of Alua's wives); Yoane, a semi-literate man of about twenty-five years; Jone, a semi-literate and bilingual (in Pidgin) twenty-two year old man; and Kane, a literate and bilingual (in Pidgin) twenty year old man. Older informants, informally consulted, included Lesepina (Alua's mother), an illiterate woman of about forty years; and Lapale, an illiterate man of about forty-five years. Non-systematic informant work and checking was done with whomever happened to be sitting around the fire in our house when a problem arose. Tumu Popeoko and Ngangane Yaetusa of Aipusa (near Wabag), while not employed as my informants but as my husband's, often helped in my early work and during language learning.

B-2 QUESTIONS USED IN ELICITATION

"One might assume...that the speakers of any language would quite naturally and spontaneously themselves frame questions to elicit... semantic information" (Weinreich 1962:190). I attempted to elicit such questions via the original question

1. Émba-me pií medé-nyá tengé dóko másа-la náya-t-e-no
   you-AG *word a*-POSS *root the know*-INF NEG-FUT-2SG-AUG
   kanda-ó dóko émba-me aípá lá-o tipá pi-pe-ngé-pé?
   see-O *the you*-AG *how utter*-O *ask do*-COMP-HAB-QU
   If you didn't know the meaning of a word, how would you ask it?

Other introductory questions which I used were

2. Áki tengé pale-ngé-pé?
   what root BE-HAB-QU
   What is the meaning?

3. Kengé/pií waká méndé le-ngé-pé?
   name/word other a utter-HAB-QU
   Is there another name/word?

At the time I used the questions below, Casagrande and Hale (1967) was not available in the field, and upon my return to Canberra, I noticed a close correspondence between the questions which I had used and those used by Casagrande and Hale in their work on Papago semantic relationships and folk definitions. For comparison with their work, I include their thirteen types of semantic relationships identified in Papago in brackets [ ]. The questions are listed in the order in which I elicited with them; I attempted to apply them systematically to every lexical entry.

[Synonymy]

4. Kengé/pií lápó le-ngé-pé?
   name/word second utter-HAB-QU
   Is there a second name?

5. Kengé/pií waká méndé le-ngé-pé?
   name/word other a utter-HAB-QU
   Is there another name/word?

6. Tengé wáká méndé palé-ly-a-pe?
   root other a BE-3SG-PRES-QU
   Is there another meaning?

[Class Inclusion]

7. Baá tátá api-ní-pí?
   he/it line who-POSS-QU
   What is his clan?

[Attributive]

8. Baá aipá-le-pe?
   it what-CONF-QU
   What is it like?

9. Baá aípá pí-pae-pe?
   it how do-STA-QU
   What is it like?

10. Baá émba-nya akí-ngi-pi?
    he/she you-POSS *what*-NGV-QU
    What relation is he/she to you?

[Operational]

11. Endakáli dúpame X-mé áki kalái pi-ngi-má-pé?
    people the-AG X-INST *what work do*-HAB-PL-QU
    What do people do with X?

12. X-mé aípá pi-pe-ngé-pé?
    X-AG what do-COMP-HAB-QU
    What should one do with X?

13. Endakáli dúpa-me X-mé aípá pi-ngi-má-pé?
    people the-AG X-INST *what do*-HAB-PL-QU
    What do people do with X?

[Functional]

14. Baamé áki kalái pi-ngí-pí?
    it-AG *what work do*-HAB-QU
    What work does it do?

[Spatial]

15. Baá ánjá sí-ngi-pi/kate-ngé-pé/pete-ngé-pé/pale-ngé-pé?
    it where BE-HAB-QU
    Where is it located?

[Contingency]

16. Aípá lá-o máso-o endakáli méndé asemánga pya-pe-ngé-pé?
    what utter-O *think*-O *people a sneeze hit*-COMP-HAB-QU
    How do people sneeze?

[Comparison]

17. Baá Y-yalé mendé-pé?
it Y-like a-QU
Is it like Y?

[Provenience]

18. X-dóko ajetáe epe-ngé-pé?
X-the whence come-HAB-QU
From whence does X come/originate?

(Time)

19. Andukú-pá endakáli dúpa-me X pi-ngi-má-pé?
which-TEMP *people the*-AG *X do*-HAB-PL-QU
When do people do X?

(Explicative)

20. Afpá lá-o máso-o endakáli dúpa-me X pi-ngi-má-pé?
how utter-O *think*-O *people the*-AG *X do*-HAB-PL-QU
Why do people do X?

(Ostensive)

The last three of the definition types (Time, Explicative, Ostensive) are not mentioned by Casagrande and Hale, but were used in work with Enga. Casagrande and Hale have postualted several other types which I did not use in Enga.

[Exemplification]

"X is defined by citing an appropriate co-occurrent, Y" (Casagrande and Hale 1967:168). I was unable to find a suitable question-answer sequence for this definition type in Enga.

[Grading]

"X is defined with respect to its placement in a series or spectrum that also includes Y" (Casagrande and Hale 1967:168).

21. Áki kóte satandíi ongó-nyá wambaó epe-ngé-pé?
what day Sunday the-POSS *before come*-HAB-QU
What day comes before Sunday?

This definition type exists in Enga as a possible question but as one that is relevant in only some cases, i.e., months, days of the week, etc. I did not use it much.

[Antonymy]

"X is defined as the negation of Y, its opposite" (Casagrande and Hale 1967:168).

[Circularity]

"X is defined as Y" (Casagrande and Hale 1967:168). In both of these definition types, Enga answers exist

22. Énda dúpa akáli daá.
woman the man not
Women are not men.

23. Yána dóko, baá yána méndé.
dog the he/it dog
The dog is a dog.

but I myself was unable to formulate a reasonable question (cf. comments below on comparison with R. Lang's question sequences).

[Constituent]

"X is defined as being a constituent or part of Y" (Casagrande and Hale 1967:191). This semantic relationship and folk definition type was not used by Casagrande and Hale in their Papago data and I did not use it in Enga either. Provenience is a reasonable question in Enga only in relation to certain classes of nouns, such as rivers, rain, hail, streams, etc. (any noun that is of the gender class of epengé?) and of humans in the sense of where does some person come from, i.e., his home village or 'place' (cf. in English: *He's a New Yorker, He's a Queenslander*).

It is also interesting to note that in Enga one can use the same kinds of questions for different relationships (compare Contingency and Explicative, Function and Operational, Attributive and Class Inclusion). In these cases, even though the questions are essentially of the same kind, the responses/answers allow us to classify the relationships involved. Casagrande and Hale note the same in Papago. In Exemplification, the attribute itself is being defined rather than the possessor of the attribute; while in the attributive, the possessor of the attribute is being defined by the attribute. Exemplification is the inverse of the relationship used in the Attributive. Furthermore, Casagrande and Hale note that class inclusion is often implied in attributive definitions, since certain characteristics of behaviour and appearance are shared by all members of a large class (Casagrande and Hale 1967:18). This difficulty (i.e., non-mutually exclusive

questions) is only problematic in those cases in which the answer does not indicate the focus of the definition (as it in fact does indicate in exemplification and attributive).

The questions used in my data elicitation were verified when further checked via the patterned frame for questions used by R. Lang (1970:6); using R. Lang's trained informant, I presented him with selected items/entries (mainly concrete, animate nouns) and elicited from him the questions he would use in questioning about that item. The results were extremely encouraging in verifying the accuracy of the questions used.

In their conclusions Casagrande and Hale mention topics for additional work on semantic relationships; these include

> 1) What additional types of semantic relationships are employed in folk-definitions made by speakers of other languages? (1967:192).

As we have seen above, Enga does provide some additional types for comparison with their work on Papago.

> 2) To what extent are various types of semantic relationships employed by speakers of all languages; are these universals of language behavior? (192).

Again, the comparison with Enga is of interest.

> 3) Are particular types of semantic relationships consistently associated, across languages and across cultures, with definitions of words falling into various form classes (e.g., antonymy with adjectives; contingency with verbs) or belonging to different lexical domains (e.g., attributive and class inclusion with plant and animal terms; function with instruments and body parts)? (192).

It was with this topic in mind that various statistical programs were run on the dictionary file to determine what percentage of each form class was defined by what particular type of folk definition (or semantic relationship). These results were most encouraging, and would allow additional (statistical) evidence to be presented. At present the results are primitive (i.e., allowing only such statements as "Of 3,000 nouns, 85% used class inclusive folk definitions"). The next stage is to produce more sophisticated results which are linked: "Of the 500 animate nouns, 95% are defined first by a class inclusive definition, then 90% of those are further defined by an attributive definition, 80% of those still further defined by a functional definition, etc."

APPENDIX C: THE EXISTENTIAL VERBS

The following data are primarily the primary taxa extracted from the total corpus of approximately 3,000 nouns and noun phrases. The data are presented by the existential verb used, then sub-grouped by semantic domain. Items which permit intersection (cf. 2.2.5) are indicated with the second existential verb following. The least frequent existential verbs are presented first.

1. Mandengé

Parts of a Whole:

alíʼ, telé	*clitoris*	
kambáke	*vagina*	katengé
pongó	*penis*	katengé
díʼ, dingíʼ	*fruit, seed, nut*	lyingíʼ
dungíʼ, lúngi	*fruit stem*	
wáingi	*sprout*	
pupúkú	*dry leaves*	

2. Lyingíʼ

Parts of a Whole:

díʼ, dingíʼ	*fruit*	mandengé

Plants:

líta	*mushrooms*	
kenapíʼti, kamalúmbi	*moss*	epengé
+bíʼni	*bean*	

Animates:

ambúlya	*wasp, bee*	

3. Palengé

Parts of a Whole:

píngi	*roots*	
amé, amengé	*fat*	síngi
makonámbí	*gourds' inside*	
kúlí, kólí	*bones*	
móna, kípi	*heart*	
ingí, litísá	*intestines*	
lénge	*joints*	
mamándá	*kidney*	
pólyá, pályá	*bladder*	
pungí	*liver*	
kondengé, kutapápú	*womb*	
ité kálanga	*small intestine*	
móna yokó	*lungs*	
andatómba	*stomach, womb*	
kongápu	*vein, tendon*	
lákapo	*testicles*	
+mísa, mínju	*muscle, meat*	
túnduingi	*spinal cord, marrow*	

Plants:

mapú, áina		
konjá		
+samúu		
+katósa		

Animates:

ímú, mánga	*worm, grub*	síngi
pombáta	*termite (?)*	
néne ándá	*maggot*	

4. Petengé

Natural Phenomena:

endákí peté	*lake, pond*	

Plants:

+letésa	*lettuce*	síngi

Animates:

énda, wanáku	*women, girls*	
yáka	*fowls, birds*	
saá	*game animals*	
mónge	*frogs*	

yúi	*rodents*	
+pusʃi	*cat*	
néne	*insects*	
nómbe	*snail*	sʃngi
yuú endángi	*spirit woman*	
indingʃ	*woman demon*	
ína	*non-human females*	

5. Epengé

Natural Phenomena:

aiyúu	*rain*	
endáki, ʃpa	*water, river*	sʃngi
kindúta	*hail, frost*	
tandáke	*hail*	
poó	*wind*	
popó	*vapour*	
línji, líndi	*clay*	
nongeané	*clay*	
wakái	*tree oil, resin*	

Parts of a Whole:

mambá	*tree oil*
aposótó, apúpú	*saliva*
liní, maú	*pus, plasma*
mánjo	*mucus*
taiyóko	*blood*
ʃpange	*fluid*
ítʃ	*hair*
ándu	*milk*
angaéti	*beard*
kindúpa	*nails*

Plants:

kútá	*reed*
kámbe	*fern*
kénde	*vine, rope*

6. Katengé

Natural Phenomena:

nikʃ	*sun*
kaná	*moon*
búi	*stars*

Parts of a Whole:

lyáa	*nose*
maítá	*back*
páenge	*thigh*
pinyéte	*temple of head*
kíngi	*arm, hand*
mókó	*leg, foot*
yokó	*leaves*
paká	*tree fork*
angapú	*jaw*
alyóko káita	*armpit*
yanú	*skin*
kondé	*nut*
ayómba	*head*
ayokondé	*shoulder*
enómbá	*forehead*
kámbú	*lips*
kalé	*ears*
katái	*fat*
pápá	*fin, wing*
keké	*tongue*
kengé	*buttocks*
lénge	*eyes*
lúma	*knee*
múmbi	*scab*
múmbitenge	*umbilical cord*

Artifacts:

ándá	*house*
kamé	*fence*
tóko	*table*
ándá íki	*sparkshield*
ándá máu	*wall studs*
+ ínja	*hinge*
+ lóko	*lock*
kalúmbá	*gate*
kílyá	*purlins*
kembó	*stile*
kópa, konámbi	*wall*
malúsa	*porch*
kanángé	*ladder, rungs*
yokó	*page, leaf, money*

Plants:

ſtá	*trees*
alámó, ſtá máſ	*ginger*
tupáita	*bean*
máa	*taro*
mapú ángſ	*sweet potato plant*
tánu	*grasses, weeds*
elyóko	*string - shrub*
kinapſti	*moss*
akaſpu	*Cordyline*
sambáſ	*pitpit cane*
+kalſpu	*peanuts*
+kanápá	*corn, maize*
lyaá	*sugar cane*
amú	*yam*
saé	*banana*
kuſma	*bamboo*
ánga	*pandanus*
lépa	*century/kenaf plant*
lépé, sangái	*sweet flat*

Animates:

akáli, wáné	*men, boys*
yályakali, táakali	*skypeople*
mená	*pigs*
yána	*dogs*
láima	*cassowary*
tindſo	*bat*
putútuli	*forest demon*
timángo, talépo	*ghost*
imámbu	*spirit*
ſpi, maſpa	*non-human males*
+yáka paúli	*chicken*
+bulumakáo	*cow*

7. Sſngi

Natural Phenomena:

molé	*clouds, fog*
kaſtſ	*sky, heaven*
kaná	*stones*
yuú, yanái	*earth, place, ground*
endákſ kéa	*gravel*

peté	*pond, depression*	
endáki peté	*pond*	
eé	*garden*	
lánga	*coals*	
kákasa	*bush, rainforest*	
kamánda	*outside*	
lémba	*edge*	
kungúma	*trash*	
mandáú	*marsh*	
yúlí	*hole*	
itáté	*fire*	
mándá	*mountains*	

Parts of a Whole:

pánga	*marsupial pouch*	
ií	*faeces*	
múmbi	*navel*	
ingyándá	*womb*	
kalé káita	*earhole*	
lénge kápá	*eyeball*	
nénge káita	*mouth*	
ií káita	*anus*	
lyákaita	*nostril*	
ánga túu	*single pandanus nut*	
sía	*hole in tree*	
mambá	*tree oil*	

Plants:

alyóngo	*bean*	
painapóló	*pineapple*	
kapúsa	*cabbage*	petengé

Artifacts:

dengé	*corner*	
+dóa	*door*	
káita, kaítlní	*door, path, road*	
íma	*ridgepole*	
kainámbu	*area inside door*	
lukúná	*inner room*	
pálo	*room, pig stall*	
pánda	*space, place*	
pepélyó	*fireplace*	
típi	*back of house*	

+windóa, winindóa	*window*
+kolósa	*clothing*
tóma	*stopper, lid*
+bakésa	*bucket*
+láma	*lamp*
+bosólo	*bottle*
laíne	*drum*
+gumíi	*rubber, plastic*
+jatáma	*drum*
+kosá	*ball*
+súsa	*shot, injection*
+jípi	*car, jeep*
+kátó	*car*
+kíi	*key*
kaléta	*disk money*
kaná	*shilling, money*
+kilóko	*clock*
kápá	*bullet*
+kápo	*cup*
+katasíni	*kerosene*
kemá	*knife*
kendái	*walking stick*
uaá	*axe*
+lésa	*razor*
+litióo	*radio*
líta	*boundary*
mamá	*arrow*
mándi, nuú	*basket, netbag*
+máni	*money*
+masísa	*matches*
mená púngi	*pig rope*
+mataséne	*medicine*
mimá	*bow*

APPENDIX D: THE PREDICATIONS OF ENGA

The data presented here on Enga predications is grouped by the co-occurring verb, in order of frequency. Within the verb groups, the adjuncts have been sub-grouped as to semantic domains. Upon revision of this work, some items thought to be predications in Lang (1971) have been found to be idioms and have thus been deleted.

D-1 lengé *utter*

I Basic Meaning:

áa	*say 'ah' in surprise*
aé	*squeal, scream/cry*
angá	*open mouth wide (as in yawn)*
aiyá	*call out name to come and get something*
aií	*exclaim*
álí	*express comfort*
alówaki	*express happiness*

ápa	*express oneself*
ápu	*say* ápu *to child*
áso	*call dog to come*
bĺsá	*express dislike by saying* tsk
bótó	*flatulate*
bulú	*sound of hum/roar*
dilindaó	*noise of bell*
dúlú/duú	*splash into water*
ée	*cry*
gaá	*grunt*
gátá	*knock, sound of something striking (wood/iron)*
geé	*call pig or dog*
gĺtl	*show teeth in pleasure*
góe	*swallow*
goó gaá	*pant*
gulangalú	*stomach growls*
ĺsu	*exclaim* ish
jáa	*sound of crack/creak*
jálo jálo	*knock*
kaá	*sound of pigs/squeal*
kaakaá	*women/girls laugh together*
kaé	*pigs squeal*
káipya/kaĺtĺ tóka	*thunders*
kákate	*whisper*
kauú	*dogs bark*
keá	*pigs squeal*
keáú	*sound of tapping/knocking*
keé	*call out*
kéké	*sound of dry rustling*
kiiyá kauú	*stomach rumbles*
kilitúló	*grind/click teeth together*
kĺpú	*thunder*
keé kaá	*pant*
kĺtá kátó	*grind teeth*
kóe/koláa	*whistle through teeth*
kopetá	*speak badly*
kosée	*cough*
kóto	*cough*
kuĺi	*gulp noisily*
kúlu	*sound of fire/water/river*
kúlu múndu	*snore*

kúu láo	*snort, snuff*
kuú	*snore*
kyaá	*pigs scream*
kyúkú/kyúú	*sound of crash/thud*
lambá	*argue/quarrel*
laíyá	*argue/quarrel*
létó	*speak clearly*
léké	*tell a lie*
lií	*suck back saliva*
lipá	*wail/mourn*
lyií	*mouth waters*
lúmbu lúmbu	*talk together at same time*
makú	*boast*
máma	*exclaim in amazement*
mána	*teach*
+misíi	*preach gospel*
mokalípi	*curse*
moló	*sound of buzz/roar*
mulí mauwá	*swear for truth of it*
múlú	*hum/roar*
múlú málú	*stomach growls*
muú	*sound of hum*
náká	*foul talk*
nalú	*talk of other line withholding pigs*
ŋaá	*cry - infants*
ŋáí	*blow nose*
ŋaŋá	*moan*
ŋaú	*sound of engine/hum*
ŋeé	*groan*
ŋée ŋáa	*pant*
ŋií	*engine whines*
ŋilí ŋalí	*stomach growls; quarrel*
ŋoó	*infant cries*
ŋúlá ŋálú	*express displeasure*
ŋuú	*grunt*
ŋyée	*agree*
ŋyée ŋáa	*pant*
ŋyíi ŋáa	*rave, cry out*
ŋyilí ŋalí	*rave, cry out*
ŋyúu	*pigs roar/grunt*
nongó	*speak poorly*

núnú	*kiss*
óo	*sound of wind/water/tree falling*
pále	*wave arm to go away*
pée	*laugh and play loudly*
piˈ	*speak*
poó	*blow*
pulupólé	*play bamboo flute*
pútai	*speak/yell loudly*
sambó	*lie/tell falsehood*
sondó	*clam up - not talk from anger*
súkú	*dislike*
súlu	*whistle*
súu	*say* psst *to get someone's attention*
támbo	*chew/swallow*
táe	*birds chirp*
tamé tamé	*stutter*
tée/tipá	*ask for*
tiˈ	*squeak/make shrill sound*
tˈítio	*whistle through teeth*
tondó	*be unco-operative*
toká	*sound of cracking - rifle, wood, stones*
tókó	*explode, blister, expel gas*
tombá	*noise of stomach*
tumbípí	*gossip*
túmbú	*speak sarcastically*
úaa	*dogs bark*
usí	*sound made when dancing*
úsú	*exclaim to child to make it sleep*
úu	*wind/fire sounds of* uu
waí	*send message*
wána	*whisper*
weé	*sing a song*
wiˈ	*call out*
woó	*reply with* woo
yaá	*talk loudly*
yandaˈtá	*boast*
yáe	*answer with* yae
yáká pilinó	*give thanks*
yakó	*cry/shout out*
yáo	*answer with* yao
yasú	*call for dog*

yópe	*whistle with lips*
yúa	*shout in unison when happy*
yuó	*lament*

II Inner State:

ápu	*be dry*
auú	*like, love*
bʃsa	*dislike*
dúli	*make strong*
koó láme	*despise/treat with contempt*
kotopálu	*wrinkle (of inanimates)*
kuʃi	*be humble*
kyóo	*be white*
lámbo	*be weak*
lembé	*die*
lemongotiʃ	*be tired/sleepy*
leoámbe	*be dizzy/faint*
likʃ malikʃ	*be decided*
lumbá	*be shady*
lyáa	*make/be ready*
lyáa pyákuá/ pyatoé	*turn up nose at*
lyuú	*show whites of eyes (in displeasure)*
lyúu	*have peace*
lyáka	*be dry*
ŋée	*sigh*
ŋenaá	*remember*
ŋyéŋe	*sigh deeply*
náwe/naweé	*be stingy/selfish*
ŋulaŋálú	*express displeasure*
pápá	*be clumsy*
papáyá/kóndó	*have pity/mercy*
púpú	*be strong*
saá/taá	*be empty/finished*
sʃi	*be disgusted*
súkú	*dislike*
támbó	*be tame/weak/placid*
táe/tái	*be wild/strong/crazy*
taiyú	*be humble/weak*
talapú	*be strong/well-made (?)*
támbo	*be weak*
tánda	*disapprove*

tangá	*be stubborn/hard/strong*
tangá tangá	*be proud*
taipú	*do well*
talá	*awaken*
tĺi	*pain searingly*
tiokó	*be straight*
tómbe	*be wet*
tondó	*be unco-operative, show disapproval*
tuĺi	*be tense/firm*
uú	*be shady*
wéé	*shame by showing backside*
yáka	*wake up*
yátu	*finish (of pain, sickness, sound)*

III Motion:

aemé	*hide*
akémá	*council*
alemále	*twitch, jerk*
amĺ	*cover (up)*
auma	*mark with eye, select*
awálĺ	*encircle/circle*
daló	*injure*
depá	*to prepare, make ready (arm oneself)*
diĺ	*distribute - inclusively (?)*
doó doó	*hold and shake (spear) ready to throw*
dopá	*drip*
dúli	*drive stakes in solidly, make strong*
goló	*to boil (of water)*
kandayokó	*ignore purposely by looking around elsewhere*
kaĺ	*pour out, spill*
káipya	*make way, give room*
káiyu	*rub*
kápya	*make way, give room*
keké káki	*swing legs*
kilĺ	*carry away (of birds)*
kópo	*fall down, descend*
kúndi	*sacrifice, offer*
kuĺi	*bend sideways*
lánga	*sprout*
láono	*circumscribe*
lyaá	*swing arms - as with axe to hit someone*
lyáa/lyóo	*pull*

lyándá	*shake (off)*
lyakalyáká	*wiggle, shake*
lyoó	*scrape sweet potato cooked in coals*
lyúu	*to skin off bark*
málo	*appear*
oili	*crumble dirt, roll grass*
paĺ/piĺ	*close - gate, door*
páale	*wave arm to go*
pápá	*shake, shiver*
péé	*fly*
péle	*shuttle string for net bag*
pilĺ pyalé	*throw out*
pokó	*grow (of plants)*
pungumangá	*cracks open (of earth)*
pyákuá	*turn aside, miss*
pyalé	*throw (away)*
pyatoĺ	*catch, throw*
pyukú	*shake, stir, move*
sáwande	*succeed, triumph*
taká	*bend (of knee, elbow)*
tálé	*free, untie*
támbó	*chew, swallow*
támbú	*stick fast, adhere*
táo	*release water from dam*
tátá	*untie*
teálé	*scatter*
tindĺkĺ	*stretch*
títí	*stretch*
titiapú	*swing back and forth from a fixed point*
tumbitúmbí	*grow, increase*
tuú	*push, press, shove*
uú	*grow in groups/profusion*
wangáyó	*look over*
walú	*shake, be amazed; have malaria*
yandá	*sink, drive into*
yandé	*shake head up and down*
yamé	*grow large (of foliage)*
yoó	*pull, stretch*
yandá	*stretch*

IV Cut/Break:

kákua	*split against grain*
kolé	*divide*
lépo	*cut in two*
létó	*cut in two*
loó	*cut/break off (as shelling corn)*
málo	*to cut part on purpose*
pìlí pyalé	*cut and divide*
popo	*break*

V Pidgin Loans:

+bakatapú	*ruin, destroy*
+boló	*boil*
+bósa/bóta	*vote*
+búŋa	*assemble*
+daunimí	*down, beat*
+kámapu	*arrive*
+kása	*play cards*
+kósa/kósimi	*court*
+kutúngusa	*crooked*
+lakíi	*gamble*
+lesísa/letésa	*election, race*
+letésa	*recess*
+líti	*read*
+lúsa	*lose, be lost*
+makimí	*mark*
+misíi	*preach, worship*
+pasatóle	*go on patrol*
+pósimi	*boss, supervise*
+pulapú	*be full*
+púsa	*boss*
+pusíi	*call cat to come*
+sakimí	*hop, jump*
+sanísa	*change - money*
+sisotóŋo	*be stubborn/strong*
+sukúlu	*attend school*
+supímí	*swim*
+winí	*win, triumph*
+wása	*wait*

VI Play:

kaná síli	*play jacks*
+kása	*play cards*

kupí dií	*play with a top*
+lakíi	*gamble, play cards*
mále	*play*
súu	*play - sledding*
tombaépí	*play*

VII Miscellaneous:

bipembapa	*flap (of wings)*
búu	*fly*
dókó	*fly*
kákí	*group of people*
kámu	*raw food (?)*
káyo	*show buttocks to shame*
keé	*pay brideprice*
kolapánali	*shrink from drying*
kópo	*fall down, descend*
lembé	*die*
liná	*catch*
lomá/lumá	*be shady*
paláṇdi	*watch closely (?)*
páta páta	*hold carefully*
páte	*ring tree to kill it*
pée	*fly*
pípuli	*make magic*
telé	*hold firmly*
tepé	*select*
yuú lyándá	*shake/knock dirt from roots*

D-2 pingí *do, make*

I Basic Meaning:

kalái	*do work*
kií	*mend*
koyá	*finish*
taputi	*protect, defend, assist*
tóko	*make/build a platform*
walé	*roll string on thigh*
yandá	*fight with weapons*
yatí	*decorate*
yokó	*make/produce leaves (of plants)*

II Inner State:

ámboi	*be in estrus*
auú	*do well*

ayéne	*be hot, sweaty*
bóko	*be weak/loose*
élya	*be ashamed*
enapóti	*be hot, sweat*
éndo	*dry*
kaá/kaú	*taste bitter/bad/hot*
kaimála	*be dirty*
kálya	*handsome (of men)*
kaméá	*do well*
kápa	*be able*
káto	*be bitter/sting*
kéndá	*be heavy*
kípa	*like (of inanimates/food)*
kombéa	*dream*
kóndo	*be heavy/difficult*
koó	*sin, do wrong*
kupá	*be cold*
loó	*be barren (of plants)*
máká	*be tired of someone or something*
málya	*attractive (of women)*
mindimandí	*be naughty*
mindinane	*get angry for nothing*
mokotíti	*be asleep/numb (of a limb)*
myúku	*stink, nauseate*
nangá	*give up and die*
nené	*make a face in disgust*
nikiníki	*be angry/irritated*
nuú	*swell*
páka	*scare*
papató	*be cold*
popó/tándá	*be in pain*
púngú	*stink*
saá	*smell*
sókó	*be tired*
tatáké	*forget, not know*
téndé	*tastes good/sweet*
tiáka	*be satisfied after eating*
tíi	*be light, shine*
tómba	*be dull*
túmbi túmbi	*be stubborn*
tundúma	*smell good/pleasant*

tuú	*be dry inside*
tuú	*be stubborn/obstinate*
umbi	*be bald*
wámbu	*be filled out (?)*
wámbu	*be skilful*
wáingi	*good*
wámu	*useless*
wáti wáti	*lose appetite*
yála	*be shamed*
yamá kákó	*be stingy; curse*
yuĺi	*itch, scratch*
yukú yukú	*tickle*

III Payments:

laltá	*pay live pigs at death*
kúmanda	*return cooked pig at death*
pandétá	*death payment*
tée	*death payment - live pigs*
pyamoná	*exchange cut meat*
makú	*present pigs at tée; payment to maternal line at child's death*
tée káita	*payment to kill someone else*
yaé	*perform pig killing ceremony*
luú	*pay for magic*

IV Play:

kyangauwále	*play cat's cradle*
kaú	*fight with mud for fun*
mále	*play*
néne	*play*

V Tie/Untie:

ápaa	*tie/wrap in a sling*
langapú	*plait a wreath*
langó/landí	*tie/bind*
mapó	*roll/wind (as string)*
monge	*unravel (of string/rope)*
yakí/yanjí	*tie/bind*
yákú yákú	*unravel*

VI Miscellaneous:

laitáka/lakĺta	*show*
látó/látú	*show*
wámu	*hide*

yaló	*hide*
golé	*hide*
éma	*have motion*
goya	*wiggle*
minákó	*turn/stir hand*
talé	*disperse/scatter (of people)*
ámbí	*scatter/spread*
andíkí/anjíkí	*flatter; bribe*
álo	*lose*
aló/alóo	*exchange; substitute*
ámbe	*ramble*
ámbé	*peel off, husk/shell*
ándu	*cover, put a lid on*
atéte	*oppose*
bátá/ bitambatau	*flap (of wings)*
elyámbu	*gather*
gélengele	*disease of sweet potato (?)*
ímbu	*sprout (of plants)*
ímí	*mould*
ínu	*set on*
kambapúpu	*mark arm with spit for counting*
kandó	*pile up*
kaé	*rub on (as oil)*
kanjongele	*procrastinate at work*
kánju	*search for*
kake	*shape with hands*
kákí	*fold (of rope)*
kálo	*step across/over*
kapoma	*shape with hands*
katekéta	*slip*
keáno	*fill up from another container*
keé/kií	*break/split with grain with knife*
kéndá	*group/gather (of inanimates) (?)*
kéló	*peel (of vegetable)*
kelyakélya	*slip*
kétá	*cook/steam in ground oven*
kewána	*fill up with liquid*
kíango	*beckon to come with hand*
kimbutítl	*fall asleep (of a limb)*
kindú	*scratch to get attention secretly*
kilyombá	*gesture of contempt*

koé	*finish*
kokótó	*strip leaves off tree*
koyá	*finish*
kónda	*gather*
kumbu	*seal ground oven*
kyoó	*trickle (of water)*
laitáka	*show*
laiyáka	*hold in trust for orphan*
lambú	*stomp*
landá	*disappear*
langatale	*trespass in garden (?)*
laká	*scabies of pig*
láma	*mature (of pigs)*
láú	*open up*
lémbá	*sneak away from someone looking for you*
lítá	*sweet talk/flatter*
lókó	*expose oneself (in anger (?))*
lóngo	*shape with hands*
lúku/lúngu	*scrape out (inside of gourd to make water container*
lúngú lúngú	*girl's magic*
lúú	*finish - talk/singsing*
lyándi	*get all wet*
lyéke	*become large in size (of pigs)*
lyangóle	*give example*
lyuú	*layer ground oven for cooking*
lyuú	*get fibers for thread making*
makandé	*try, tempt*
máki	*stand side by side*
makóle	*make one's round*
málu/yúlí	*bury*
máu	*gather, pile up*
minákó	*turn/stir hand*
mondó	*adopt/care for (humans/dogs/pigs)*
muláó	*eats spots into pod vegetables*
mútí	*cook on top of fire*
nambó nambó	*slander*
naloá	*speak vulgarly*
namú náe	*speak angrily*
née	*do magic; sacrifice to ghosts*
nelenelé	*disease of sweet potato*
némá	*bird feeds baby bird*

nepo	*play at fighting*
nenáta	*test to see if eel is in trap/hook*
néné	*hum, buzz*
niki niki	*bite on hard object*
núnú	*kiss*
pambá	*reheat food*
pákó	*peel off husk/shell (not skin)*
pálo	*dam up (of water)*
páina	*dry season, fair weather*
pánda	*set leaf on head as a base for feather decoration*
pánjú	*scar*
pápu	*miss, dodge*
patóko	*peel/skin*
pau	*scrape ashes off cooked sweet potato*
peé	*stuff intestine to make sausage*
pendu	*lick*
pimapíma	*work black magic*
pípuli	*work magic*
poó	*blow fire*
putítí	*shake in anticipation; cramp*
puú	*fill up*
salé/talé	*divorce; scatter/disperse*
siki	*rise to height (of smoke)*
talípi	*distribute*
táma	*praise/honour, thank*
tandi	*lick*
tangaí	*split bark*
tápá	*prepare*
tembá/tembó	*heat up food*
tíi	*change into a ghost*
tikilyá	*cut lengthwise*
tipá	*ask*
tipatapú	*cut/break lengthwise*
típú típú	*gossip*
tísa	*cut/break*
tóma	*fasten with lid*
tómó	*shake/vibrate*
toné	*fill up netbag*
tóngo	*double up fists*
toní toní	*throw/hit straight*
totóma	*make forked for house building*

uatí	*praise (?)*
umbi	*be bald*
wáipa	*add on/join together*
wámbu	*be skilful*
wátá wátá	*knock*
yandó	*dry (by fire)*
yóngé péé	*wear manufactured clothes*

D-3 píngi *hit, strike*

I Basic Meaning:

angí	*have a landslide*
áili	*after-effects of lightning strike*
aló	*make fire by friction with bamboo*
kánda	*beat with a bamboo pole*
kaú	*fight with mud*
kimbutia	*kick*
kindúta	*hail*
konjame	*whip*
lánga	*make fire glow*
laté	*cut/slash (of weeds/grass)*
minjílí	*have a landslide*
múmbá	*scar*
nánga	*sharpen*
nénge	*sharpen* (nénge = *tooth, horn, tusk*)
patá	*split pandanus nut*
pepó	*to slash down vegetation*
tánu	*mow grass*
yaé	*kill pigs - sequel to* tée
yuú wapáka	*lightning strikes*

II Peel:

káká	*skin peels off*
kéló	*peel (of vegetables)*
kombá	*shed skin*
lómba	*shed skin*
pakóna	*peel off husk/shell*
táka	*peel*
yanú	*peel/strip (of bark/skin)*

III Cut:

lámbá	*cut/break with grain*
lánga	*cut/break with grain*

leé	*shorten by breaking*
lyoó	*cut in pieces*
múndu	*slice, cut up*
túu	*split (as pitpit)*
paté/patá	*split wood, nut*

IV Payments:

betá	*pay restitution*
kímbu	*pay back, revenge*
nyokó	*to repay*
saándi	*give loan with expectation of return with interest*
watápae	*pay marriage payment*
yáno/yánu	*repay*

V Loan Items:

+kosá	*play ball*
+lóko	*lock*
+nílí	*inject; nail*
+pépa	*write*
+pusá	*play soccer*
+takísa	*pay taxes*
+wasawása	*wash*

VI Miscellaneous:

sángá/sánga	*cover up*
yámbé/yambí	*cover up*
yamé/yamí	*cover up*
yánu/yáno	*answer*
ítingi	*answer*
wangatátó	*wriggle*
wángó wángó	*turn around*
malá	*play guess which hand*
aí	*stink*
álo	*run*
ámbé	*do by accident/unknowingly*
angaínná	*have a cold*
asemánga/ asimánga	*sneeze*
atómé	*recount news*
aútí	*open, remove contents*
beé	*have sore matted eyes*
elyámbo	*gather*
éngeme	*bribe to kill/injure*

eteké	*like/love*
itáki	*read/count*
kái	*rub on (of paint/oil)*
kolo/koto	*magic*
komé	*sprout*
kumbu	*start a singsing*
kundí	*miss*
lama	*tame (of pigs)*
leé	*naughty child*
lií	*fall down*
lítá	*mark off (boundary)*
lombelómbé	*be incapable*
lúngu	*be angry within*
maá	*appear*
mámbo	*praise/worship*
nángátu	*hiccough*
némá	*black magic with corpse*
nongó	*be clumsy/incapable*
paa	*cross arms on chest*
paká	*brace (of banana trees)*
pití	*close*
pongéma	*blacken with soot/charcoal*
póngo	*tie knot*
pókó	*cross*
póo	*work black magic*
póo	*miss*
púmbu	*be muscular/filled out*
pupú	*pierce*
pyóngo	*soothsay; fortune-tell*
pyángá	*belch*
tángó	*be strong/hard*
teé	*begin*
tépé	*put a barrier so something won't fall down*
taú	*shape/press with hands*
tóle	*be with*
tombó	*mark off (boundary)*
tómoka	*bribe to injure/kill*
topó	*buy* (also topó nyíngi *sell*)
túngi	*fire; be in authority*
túmbi	*be stubborn/obstinate*
túmbu	*be stunted*

tumú	*wrap/bind*
yáe	*mourn, weep*
yaſná	*be sick*
yaú	*shout out*

D-4 síngi *hear*

aſ	*smell, sniff*
baná kapá	*be bald*
élya	*be ashamed*
ende (M)/ endó (T)	*warm oneself*
káka (T)/ kaká (L)	*loosen, untie*
kakáná	*be left over/undone*
káme	*forget*
kepá	*restitution for a killing (paid in pig quarters)*
kiſ	*avoid territory of slain enemy*
kiſ	*be abandoned (of house)*
kímbu	*sing at courting party*
kisá	*accuse*
lamángá	*together with (?)*
langálú	*show anger/disappointment*
latilátí	*speculate*
lóma	*pray; dedicate/sacrifice to the spirits*
lópo	*famine*
lyakſ	*lay fallow (short time with only grasses growing*
máki	*mark*
mapú	*plague comes and many die*
mapú	*lay fallow (short time)*
mondó	*mound up*
múku	*fertile (of land)*
nánga	*sharpen (with file or stone)*
pakélyó	*scar*
palé palé	*be overgrown/fallow*
pándu	*trap*
páté	*wash out (bridge)*
piſ	*obey, listen/hear*
pyalſ	*summon/beg*
sanda	*break off*
titíki	*stretch*

tombá	*be bounded, be fenced*
tombáuli	*fall down on face, cover face with hands*
tombó	*mark*
tukúme	*rub noses*
tundumá	*smell good*
túpĺ	*be stiff/unconscious, faint*
yámbo yámbo	*be light (not heavy)*
yanái apáka/ yanái tamangali	*strike (of lightning)*
yapĺ	*give to give to someone else*
yuú apáka	*strike (of lightning)*

D-5 nyĺngi *get, take*

angĺ	*break down (mountains)*
até	*tatoo*
dengé	*repay, pay back*
énda	*copulate*
énote	*shave sideburns*
imámbú	*take a holiday, rest*
ĺpa	*stroke pig before killing (women only)*
ípa	*be baptized*
kaé láo	*magic-rub pigs before killing*
kaĺmbu	*receive baptism*
kakó	*remove skin from drum*
kayá	*compost mounds in garden*
kiĺ	*take and lead by hand*
kĺpu	*misbehave*
kitútu	*wrap around*
kumbú	*shade*
leé	*be stunted*
luú	*pay (especially for sorcerer)*
mána	*learn, catechumen*
mangá	*jump down*
móka	*loose/free*
mómo	*rip/tear (paper)*
móya	*inherit*
nángala	*dig a ditch*
nyokó	*take/pull back*
páke	*steal*
pindĺ	*cut/split across grain*
putútu	*get string used on wigs*

sána/syána	*dig a ditch/boundary*
támá	*release from trap*
tándá	*afflict*
tíi	*stroke pig for sacrifice*
tílya tílya	*persecute (?)*
topó	*sell*
túu	*rip open*
waá	*steal*
yaíná	*become sick*
yapaó	*choose/elect*
yólé	*be paid salary/wages*

D-6 miníngi *hold in hands; control*

angamáe	*yawn*
buú	*fall down and break, be drunk*
ía	*copulate*
káita	*befriend*
kenánge	*crochet (intestines for cooking)*
képó	*build a fire by friction*
kitikíti	*close door with a barrier of wood and rope to lock it*
kunís	*level mound for planting*
langálú	*swear (oath/vow)*
lélyo	*be incompetent*
maa	*stand guard/watchman*
maá	*hold every one*
makéá	*make fire by friction*
makimís	*mark (boundary)*
masi	*guard*
matípu	*question in court*
mímís	*do correctly*
minjukú	*crumble with fingers*
opóné	*show hospitality*
pánga pánga	*have skin disease - scabies (?)*
pépé	*do magic with arrow*
timina	*flood*
timína	*braid (of men)*
títowali	*quake (of earth)*
tumú	*hold and elevate, categorize*
waímá	*apportion/divide*

D-7 kaengé *be (of inner states)*

ayéne	*be hot, heated; to sweat*
auú	*like, love*
élya	*be ashamed, shame*
enapóti	*sweat*
eteké	*like, love*
giĺ	*laugh*
ĺmbu	*be angry*
káiyo	*expose buttocks to someone*
kekéná	*be fed up; tired of someone/something*
kéndá	*be heavy*
kĺpa	*like/love (of inanimates ?)*
kóndó	*have mercy/pity*
kúli	*be stubborn*
lemongotĺ	*be tired/sleepy*
lóko	*be tired of someone/something*
lópo	*be hungry*
maitále	*be tired of someone/something*
máká	*be tired of someone/something*
myúku	*be sick of someone; nauseated*
nánú	*be thirsty*
neyá	*think (?)*
nikinĺki	*be angry at someone*
paá/páka	*be afraid/fear*
pombáta	*be bored/angry*
pópó	*be hot and dry*
putĺti	*shake in anticipation, be greedy*
tálo	*be hungry*
tiáka	*be satisfied (from food)*
yála	*be ashamed*

D-8 palengé *lie (inside)*

I Basic Meaning:

angó	*fall down (when hit by arrow)*
bálo	*lay fallow*
ingĺ	*have food in stomach, be full*
luú	*sleep*
lyĺta	*swell (up)*
maá	*eavesdrop, appear secretly*
+máki	*mark*
máú	*cover/seal (of earth oven)*

ŋeé ŋaá	*pant*
sóto	*offer hospitality*

II Disease:

genánge	*have diarrhoea*
ſmú	*have a parasite (of sweet potato)*
inginyá	*have diarrhoea*
kitú	*scabies (of pigs)*
kulíngi	*have dysentery*
mángá	*have a fungus (of sweet potato)*
meké	*scabies (of pigs)*
mónda	*die at roots (of trees)*
mulú	*disease of sweet potato/beans*

III Menstruate

andáka náo	*menstruate*
ikſ náo	
yangúpae	
kamáka náo	
yoó náo	

D-9 katengé *stand*

akáli	*be married (of women)*
ámbé	*doesn't think; doesn't want to do something*
ángó	*be appointed by Government Officer; forbidding fighting during settlement*
kaſtſ	*thunder (sky)*
kámbú	*be furtive/stealthy*
kápu	*stab, poke*
kátſ	*thunder*
kotó	*take a break*
kuaá/kueta	*be abandoned (of house)*
léta	*be alive*
máki	*be a boundary sign; mark a boundary*
páma	*take a break*
pupú	*impale/pierce (onto)*
sáká	*be alive*
titſ	*line (in rows)*
tóle	*live together*
tóo/toyá	*stand upright*
tuná	*rise to height (smoke)*
wáa	*be skilful, avoid deception*

D-10 pengé *go*

ámbé	*ramble*
angú	*step across*
anjú	*go slowly*
baĺ baĺ	*roll*
kóko	*be deep, go inside*
léte	*become well*
makóle	*make a round trip*
mángá mángá	*hop/skip/jump; boil/bounce (water)*
pimbipápu	*flap (wings), fly*
pitimá pitimá	*crawl*
pongó	*go stealthily; be sneaky*
pukimĺná	*snatch and go*
sáká	*become well*
wakĺ wakĺ	*limp (?)*
yokópĺ	*hide*

D-11 nengé *eat*

ingĺ	*growl (stomach), cramp (?)*
kámbú tángo	*bite lips; seem to do something wrong together*
kiĺ	*be cold*
kĺponge/ kipongoi	*swallow, gulp*
mómo	*rot*
mútĺ	*smoke tobacco/cigarette*
páke	*steal*
popo	*be difficult*
taá ikĺ	*be stingy*
tándá	*afflict*
táu	*cross/ford river*
tómbá	*be disagreeable, be angry*
tómbó	*be belligerent*
yaĺná	*be sick*
yuumĺ	*consume (of ground)*

D-12 tengé *burn*

iĺ (kúlĺ)	*be constipated*
ĺmbokoi	*flatulate*
kokó	*swell up (from allergy/bump)*
lekeléke	*suffer (from affliction/difficulty)*
lénge	*be animate/alive; be a wit (figuratively)*

liní	*fester*
lúngú	*flame*
mandá	*be cold (objects), be dead*
maú	*fester*
némbe	*think, hesitate*
poó	*dry up, shrivel up (of leaves)*
pundí	*be underdeveloped/stunted*
puú	*urinate*
sokosóko	*be stunted*
yúli	*blaze (of fire)*

APPENDIX E: PREDICATIONS FOR COMPARISON

This appendix contains the raw data used for Chapter Five. The languages and page numbers are presented below. Where possible, adjuncts in the predications are given with English glosses.

A Asmat - Ajam dialect

As in most Papuan languages, many actions and situations are expressed not by a verb, but by a verbal expression of which the first part is nominal and the second verbal. In some cases both parts are entirely alike or similar to each other (Drabbe 1959:25).

The cognate object verbs are:

1.	*invite*	mben mben-
2.	*weep*	mbetsj mbetsj- *a weep to weep*
3.	*bathe*	mbui mbui- *a bath to bathe*
4.	*dance*	ndi ndi- *a dance to dance*
5.	*wrap in a palm leaf*	wu wu- *a bundle to bundle*
6.	*violate*	okore okor- *a rape to rape*
7.	*adorn oneself*	tsjosou asou-
8.	*laugh*	utsj otsj- *a laugh to laugh*

do e- (also means *say*)

9.	*work black magic*	arau e-
10.	*step*	at e-
11.	*play*	atou e- (cf. Enga pingí and lengé)
12.	*rot*	of e-
13.	*distribute*	sei e-
14.	*be afraid*	omar e-
15.	*steal*	osom e- (cf. Enga nyíngi)
16.	*deny falsely*	pir e-
17.	*be in need of*	to e-
18.	*undulate*	wa e-
19.	*make figures*	wou e-

say ji (also means *do*)

20.	*hear*	jan ji-
21.	*cry and whine*	jen ji-
22.	*leave behind*	mbakan ji-
23.	*spit*	mbese ji-
24.	*be fond of*	ndamos ji-
25.	*paddle*	po ji-
26.	*rot*	of ji- (cf. (12) above)

hit af

27.	*sneeze*	jaki af
28.	*die*	ndamir af-
29.	*beat*	omop af-
30.	*be in love (said of a woman)*	mbanam af-

B Asmat - Flamingo Bay dialect

do e (also means *say*)

1.	*work up the inner part of the the pith of the sago palm*	anam *inner part of sago*
2.	*be known*	ajpama *known*
3.	*play*	atow *play*
4.	*intend, think of*	caj *plan*
5.	*have sexual intercourse*	caj *sexual intercourse*
6.	*hear*	jan *sound/ear*
7.	*carry a heavy load*	jec
8.	*be very busy with*	jimamuc *engrossed*
9.	*dart to and fro (of fish)*	jipis *darting to and fro*
10.	*surround*	jiwa
11.	*shout, yell*	yu *yell, raise a war cry*
12.	*cause someone to be quiet*	karem
13.	*leave behind*	makan
14.	*screech (of ghosts)*	njonjonjo
15.	*devour (of maggots)*	njernjer
16.	*make a gift in return*	tosow *give made in return*
17.	*rustle (of leaves)*	wu *rustle*

say ji (also means *do*)

18.	*squeeze out sago pulp*	apim
19.	*hear, listen*	jen
20.	*leave behind*	makan
21.	*row*	po *rowing*
22.	*sing dirges*	purumuc *dirge, lament*

hit, strike af

23. *like, love* — manam
24. *throw lime* — mi
lime
25. *die* — namir
dead
26. *beat* — omop
a blow
27. *abuse* — cemew
28. *move on (of walking, rowing)* — ja
29. *watch carefully* — masin
30. *have as a wife* — per
31. *work up with a chopping knife* — sejpa

do, work em

32. *play football* — mar atow
33. *catch crabs* — mer
34. *fish with a net* — jim

chop, scoop up, strip off along a curved surface ak

35. *chop growth off a tree* — anuk
36. *make a canoe* — ci
37. *shave* — okon fin
38. *catch crabs* — pe

chop am

39. *fasten the headband to a carrying bag* — com
40. *waste* — nani in
41. *cover (a house) with thatch* — onow

eat an

42. *have sexual intercourse (of a woman)* — cemen ([*of a man*] = cen)
43. *drink* — mu
44. *take a rest* — sis

see, look at, hear, smell, know (perceive) por

45. *plan a murder, massacre* — so porjit
46. *plan to kill, bring disaster upon* — porjursum
47. *practise magic against* — aruw porom

The cognate object verbs are:

48. *sleep* — is es-
sleep sleep
49. *weep* — moc moc- (cf. A-2)
weep weep

50.	*bathe*	mu mu- *bath bathe*	(cf. A-3)
51.	*dance*	ni ni- *dance dance*	(cf. A-4)
52.	*violate*	okore okor *rape rape*	(same as A-6)
53.	*wrap in a palm leaf*	wu wu- *bundle bundle*	(same as A-5)
54.	*adorn oneself*	tsjosou asou-	(same as A-7)
55.	*laugh*	uc oc- *laugh laugh*	(cf. A-8)

Examples (1-47) are from Voorhoeve 1965; (48-55) are from personal communication by C. L. Voorhoeve.

C Mianmin

Mianmin has a small class of verbs which occur in what we have discussed as predications; these are galin *say*, unemin *go*, kemin *do*, and labonin (has no meaning alone, and is used with emotion words). Some examples of these from Smith and Weston 1971 are:

do kemin

1.	mikik kemin	*prepare*
2.	long kemin	*sit quietly*
3.	yang kemin	*answer*

go unemin

4.	flou flou unemin	*fly*
5.	tekein unemin	*understand*
6.	skila unemin	*run away*
7.	lolu unemin	*jump (with fright)*

say galin

8.	bing galin	*tighten*
9.	fu galin	*breath*
10.	meng galin	*stiffen*
11.	getang galin	*clear (of weather)*
12.	metek galin	*smack lips*

*labonin

13.	gal labonin	*be tired*	
14.	gil labonin	*be cold*	(1971:48f.)

*If labonin is the equivalent of Enga kaengé, then Enga would not be unique in this respect, also Mianmin might well have other EV. Additional data is needed on this question.

D Telefol

P. Healey's article on Telefol Verb Phrases (1965) contains much material on what she terms auxiliary verbs (used with an adjunct) (pp.30-42) and verb periphrases (pp.42-7). This being the case, we will deal here only with a portion of the Telefol data and refer the reader to her article for the complete description. Healey originally states:

> There is a small group of Verbs which commonly occur with verbal Adjuncts. These Verbs may have virtually no semantic significance when they occur with an Adjunct, though they normally have distinctive meanings when they occur alone in a Verb Phrase. Their function is as carrier of aspect, tense, subject person-number, and other suffixes. Most Adjuncts occur with only one of these Auxiliary Verbs. When these Verbs occur along as Simple Verbs, they belong to various syntactic classes (Transitive, Intransitive, Motion, Complementary, Quotative). The Complex Verbs in which they occur as Auxiliary may be Transitive, Intransitive, or Motion, depending on the Adjunct, not on the syntactic class of the Auxiliary. A Complex Verb involving an inseparable Adjunct is made benefactive by modification of the Auxiliary Verb (1965:30).

A wide variety of different forms occur as Adjunct before the Verb keemin *do, be* to form Complex Verbs (34). In Telefol keemin *do* can be used to form Complex Verbs in various ways:

> The Verb keemin provides a mechanism whereby a Complex Verb may be formed from a Noun Phrase Nucleus, from the classes manifesting such Noun Phrase Laterals as Pre-Direction (D_1), Post-Direction (D_2), and Person (Pr), from an Adverb, from an Adjunct, from a loan word, and from a Verb (35).

In the case of Loan Words, the "forms borrowed, usually from Neo-Melanesian or English, may be either Nouns or Verbs in the source language."

Loan Words:

1.	*settle a debt*	béékkim keemin
2.	*(water) boils*	bóólbol keemin
3.	*not let him go*	faasim keemin
4.	*weigh, measure*	sékel keemin
5.	*be sick*	síksik keemin
6.	*attend school*	súkul keemin

do keemin

I Basic Meaning:

7.	*be disappointed*	bát kéemin
8.	*be unattended, abandoned*	faán kéemin
9.	*be lost*	maakálo keemin

10.	*be thankful*	misam keemin, sukuul keemin
11.	*be kind, friendly*	bal bal keemin
	II Motion/Activity:	
12.	*part (grass to look or go through)*	bikek bikek keemin
13.	*kick around (of legs of dying pig)*	biteng bíteng keemin, also: bitíng bíteng keemin
14.	*mix, stir it*	fákálík fákálaak keemin
15.	*stagger, walk erratically*	kabi kabi keemin
16.	*flap wings, flutter, hover*	kafi kafi keemin
17.	*tickle, sprinkle down*	kali kali keemin
18.	*shiver*	muk muk keemin
	III Miscellaneous:	
19.	*make booming sound, clatter (of tin)*	kalíng kálung keemin
20.	*growl*	nililii nililil keemin
21.	*hiss*	seek seek keemin
22.	*ring, clang (e.g. bell)*	tangaang tangaang keemin

say, see that, want to akan'kalin

	I Basic Meaning:	
23.	*ring the bell*	béélo akan'kalin, tángaáng akan'kalin
	II Inner State:	
24.	*be taut, tighten*	biing akan'kalin
25.	*be self-disciplined*	ditang akan'kalin
26.	*(weather) becomes dark*	mitik akan'kalin
27.	*be stiff*	niil (kub) akan'kalin
28.	*relax, be satisfied*	bilili akan'kalin
	III Miscellaneous:	
29.	*blow away (dust, ashes, insect)*	fuu akan'kalin

E Oksapmin

Lawrence (1971) mentions 'verbal adjuncts' in Oksapmin, and gives examples of *do* and *say*; he mentions as well loan items and noise types.

do, make hapaat

1.	*thinks*	daa hapaat *thought does*
2.	*gets big*	isip hapaat *big does*

3.	*is happy*	daa yah had *thought good did*
4.	*got a hole in*	tem ta-hah *hole* intransitive-*did*
5.	*writes*	baraak ta-hapaat *writing* intransitive-*does*
6.	*understands something*	am hah *knowledge did*
7.	*is angry at me*	ator nahapaat *anger does-to-me*
8.	*looks at it*	waa daipaat *look puts-in*
9.	*looks around*	waa tahapaat *look* intransitive-*does*

say aripaat or porpaat

10.	*arrives*	kong aripaat *arrive says*
11.	*dies*	hapus aripaat *die says*
12.	*does*	has porpaat *do says*
13.	*splits*	kwes porpaat *split says* (1971:11)

Loan Words:

14.	*goes to school*	sukul hapaat *school does*
15.	*teaches me*	sukul nahapaat *school does-to-me*
16.	*worships*	waratu hapaat *worship does*
17.	*makes*	wokim daipaat *make puts-in*

Noise Types:

18.	*makes a rattling sound*	hes hes aripaat *rattle rattle says*
19.	*makes a tapping sound*	kaang kaang aripaat *tap tap says*
20.	*makes a stamping sound*	gwi gwi aripaat *stamp stamp says* (1971:6ff.)

Note in Oksapmin, that the majority of loan items occur with the verb *do* (cf. Telefol), that the one [+inner state] example given (7) takes the verb *do*, and that all the noises types take *say*.

F Kewa

In other cases, the verb expounding the Predicate in a complement clause co-occurs according to the exponent of the Complement tagmeme. The following give an indication of the range of such paired exponents

speak lá	
1. *court*	kunaná lá
2. *argue*	ápe lá
3. *laugh*	kíri lá
4. *stretch*	rídu lá
bring méá	
5. *smell*	káá méá
6. *ask*	ágaa méá
eat ná	
7. *suckle*	ádu ná
8. *commit suicide*	ópé ná
9. *steal*	páge ná
emit ra	
10. *defecate*	i ra
11. *spit*	sópe ra
12. *wilt*	nááre ra
13. *flood*	ípa ra
hit tá	
14. *sneeze*	girá tá
15. *dance*	mátaa tá
16. *thunder*	áári tá
make pa	
17. *file*	nága pa
18. *itch*	kiru pa
19. *decorate*	pépéna pa
20. *be strong*	puri pa (Franklin 1971:74)

G Kaugel

"Kaugel has only about one hundred verbs. Most of the verbal concepts are expressed by the use of a word + verb, in which we cannot presume that the verb will maintain its usual meaning." (Head and Head 1972:21). The Heads give four examples:

1.	*wrap a parcel*	kulupi to *parcel hit*
2.	*do work*	kongono te *work do*
3.	*be suffering from hunger*	engele(ne) kolo *hunger*(act) *die*
4.	*be sick of* (i.e. colloquial English)	siye kolo *laziness die*

H Melpa

hit ronum

> The verb 'RONUM' is perhaps the most used of all the Mogei [Melpa] verb forms. In combination with nouns, adjectives, and verbs, there are over a hundred different meanings (Ross 1946:41).

1.	*spit*	ol ronum
2.	*urinate*	pu ronum
3.	*miss a shot*	keda ronum
4.	*rotten*	kigil ronum
5.	*coitus*	noimp ronum
6.	*string beads*	wilya ronum
7.	*make friends with a girl*	ampoga kwime ronum
8.	*bleed*	mem ronum
9.	*ford a river*	nu rump ronum
10.	*tired*	enimp ronum
11.	*wind round*	moegup ronum
12.	*act as helper*	reb ronum
13.	*slack or bend something*	eg ronum

Examples are:

14.	*It is raining hard.*	Kona kits ronum.
15.	*Why don't you write neatly?*	Nim nabaelinga peper rogun kai mondi na mondunt?
16.	*I am hungry.*	Na kund ronum.
17.	*Which boy is always breaking wind here?*	Kang namda ilye regreg te ronum? (Ross 1946:42)

Further examples of predications with ronum are given by Strauss (n.d.:82):

18.	*I am getting sick.*	Ten enemp ronom. *me sickness is beating*
19.	*We were hungry.*	Ten kun rom. *us hunger it hit*

do enem

20.	*It turned bad.*	Kilt em.
21.	*It is short.*	Punt enem.
22.	*It is good.*	Kae enem.
23.	*It is tasty.*	Teŋen enem. (Strauss n.d.:82)
24.	*He was making a netbag when he struck me.*	Ual etiba morumkin na rom.
25.	*As he finished his task the plane came.*	Kongen etiba kenimkin balus om. (Ross 1946:39)
26.	*I feel pity.*	Na kaemp enem. *me it makes liver*
27.	*We feel ashamed.*	Ten pipil enem. *we shame it makes*
28.	*I like/love it.*	Na numan enem. (Strauss n.d.:83)

say nenem (Strauss n.d.:87)

29.	*The engine is making a noise - is running.*	Masi i ik nenem. *machine* ik *say*
30.	*I forgot.*	Na apra nem. *me forgetful it said*
31.	*I am talking.*	Ik nent. *word I am saying*
32.	*It ran over (spilled).*	Ol nem.
33.	*It comes to light (i.e., is revealed)* (said of stones in river, stars in sky).	Mot nenem.

eat nonom (Strauss n.d.:82)

34.	*You are poor.*	Nim koropa nonom. *it is eating you poor*
35.	*You are emaciated.*	Nim moka nonom. *it is eating you lean*
36.	*I have a headache*	Na mai nonom. *me forehead it is eating*
37.	*We have toothache.*	Nen gu nonom. *us teeth it is eating*

come onom

38.	*The boy has diarrhoea.*	Kaŋ e ogl ompa onom. *boy him abdomen coming it goes*
39.	*We are feeling nauseated.*	Ten mik onom. *us vomiting is coming*

go ponom

40.	*It is hard*	Rontogl ponom. *hard it goes*
41.	*It is long*	Rogl ponom. *long it is going*

give ngunum (Ross 1946:44)

42.	*aid, help*	etiba ngunum
43.	*scold, talk angrily*	ig moera ngunum
44.	*advise, admonish*	ig kun ngunum
45.	*set food to catch a pig*	kung hub ngunum
46.	*set a fishtrap*	auma paga ngunum
47.	*be deaf*	kum ngunum

I Banz/Wahgi

> A very important characteristic of the Banz language (shared, of course, by other non-Melanesian languages of New Guinea) is the relative paucity of independent verbs and the great abundance of idiomatic verbal expressions composed of a frequently occurring verb joined to another verb, a noun, adjective, or another part of speech. ...we find a small number of verbs in the Banz language which occur again and again, each time with a different meaning, depending on the combination we find them in. These verbs are referred to as 'so-called auxiliary verbs.' They are not auxiliary verbs in the true sense of the word because they are not always 'auxiliary' to another verb but often, if not most of the time... they are the main and only verb in the sentence. Moreover, these so-called auxiliary verbs do not occur only with verbs which they help but with nouns, adjectives, adverbs, etc. They are, therefore, only quasi-auxiliary verbs... The most important of them are: to *strike*, ŋe *speak*, kelle *throw, send*, pile *hear*, tse *take*, teye *put*, gollo *die*, no *eat*, and, finally, the verb do, which has no English equivalent (Luzbetak 1954:136).

strike to

I Basic Meaning:

1.	*There are waves on the water.*	Noll mong tonom. *water a-disturbance it-strikes*
2.	*I cut my finger.*	Na angell mongom dze ront. *I arm's appendage knife I-struck*
3.	*Take a bite.*	Kog'le kal to. *biting a-break you-strike*
4.	*The sun isn't shining.*	Ants na ronom. *sun not-it strikes*
5.	*I took a shot.*	Na masket tont. *I gun I-struck*
6.	*I nailed.*	Nil tont. *nail I-struck*
7.	*The axe with which I killed the pig is here.*	Dze na kong to gont tem e. *axe I pig striking I-die it-is this*

II Cut/Break:

8.	*He has only one eye.*	Dungollyemto kal tom. *eye part a-break it-struck*
9.	*The saucepan out of which I was eating is broken.*	S'spen mog'ŋe nont kal tom. *saucepan food I-ate a-break it-struck*

III Cover:

10. *I fill the rat hole.*
Koi kar pam, usingal tem, na pipil tont.
rat's hole there-is, a-road there-is, a-covering I-strike

11. *I cover the food.*
Na mog'ńe boki ront.
I food a-covering I-strike

IV Bodily Functions:

12. *I have a headache.*
Na peng tonom.
I (my) head it-strikes

13. *I am very hungry.*
Na końe kes tom.
I hunger badly it-strikes

14. *I am hungry*
Na końe ronom.
I hunger it-strikes

15. *I am angry/sad*
Na eńts munt ket rom (kes tom).
I bowels lungs bad it-strikes

16. *Attention!*
Kane boll to.
looking with strike

17. *spit*
kuńdzip to

18. *urinate*
poll to

He wants to urinate.
El poll tonal ńe pisem.
he urine I-shall-strike saying he hears

19. *be intelligent*
numan ka rom

He is really an intelligent and clever person.
Wall kan'm ye numan ka rom.
thing he-knows man thought well it-struck

20. *be frightened, excited*
mong to

21. *be stubborn*
pile wik ro

You are stubborn.
Nim pile wik ronom.
you (s.) hearing stubbornness you-strike

22. *be breathless*
munt to

I am breathless.
Na munt tonom.
I lung it-strikes

23. *I flatulate.*
Eńts ront.
wind hit

24. *be bleeding*
mayam to

V Inner State:

25. *be red*
bang to

26. *be full*
pik ro

27. *have fever*
kur ro

VI Bind/Tie:

28. *bind, tie*
kan to

VII Miscellaneous:

29. *I warm up (the food).* — Na mull tont.
I a-heating I-strike
30. *put into* — to
31. *make black magic* — kum to
32. *chase* — tsike ro
33. *make an alliance* — tap rol
34. *play ball* — koṅts ro
35. *adorn* — mon to
36. *play Jew's harp* — tamball to
37. *be foggy* — komp kum bon tonom
38. *hear* — pil poll to
39. *call* — wi ro (why not *speak*?)
40. *bite* — to (why not *eat*?)

do/make/affect ere (pp.141-4)

I Basic Meaning:

41. *work* — kongan ere

II Inner State:

42. *be thirsty* — numuṅ kap'l ere
43. *be fit/straight* — kablle're
44. *be happy* — eṅts munt kae ere
45. *have pain* — ṅimbil ere
46. *be very good* — ka kiṅe ere
47. *do wrongly, feel bad* — kes ere
48. *be strong/be the winner* — omblom ere
49. *make bad, ruin* — ere kes mog'le
50. *make trouble* — punt ere
51. *do good to* — ka ere
52. *be soft* — kosil ere
53. *be cold* — bi ere
54. *be beautiful, be nice, good* — ka ere
55. *be dull*
This axe is dull. — Dze rumba'nem.
axe dull it-makes
56. *be shamed*
He had sexual relations with the girl. — E kisal-enem-wall ambell boll erim.
he shame-it-makes-thing girl with he-made
57. *ridicule* — alem ere
58. *breathe*
Is he still breathing? — E dosa elngin erim mo?
he yet a-breathing-sound he-makes, is-it-so

59.	*cry*	ga ere (Why aren't (58-60) used with *speak*?)
60.	*snore in sleep*	wur ellńin ero
61.	*excrete*	eńts ere
62.	*be angry*	Na popoll enem. *I am angry.*
63.	*be sleepy*	Na dungol ombuń enem. *my eye heavy it-makes* *I am sleepy.*

III Play:

64.	*play, joke*	urmal ere
65.	*play cards*	kas urmal ere

IV Miscellaneous:

66.	*make black magic*	kum ere
67.	*celebrate a pig festival*	kong-gol ere
68.	*make noise*	ollup ere
69.	*laugh*	tow'll ere (Why not *speak* a laugh?)
70.	*forbid*	ma pil ere
71.	*hide*	ogul ere
72.	*wash*	wasim ere (cf. Enga waswása píngi = *hit*)
73.	*buy*	top ere (cf. Enga topó nyíngi = *take/get*)
74.	*be dark*	Dungollemil enem. *eye darkness it-makes* *He has poor eyesight.*

speak ńe (pp.147-9)

I Basic Meaning:

75.	*speak truth*	kuń ńe
76.	*speak (word, language)*	yu ńe
77.	*make noise*	killkoi ńe
78.	*lie, speak lies*	gent ńe
79.	*ask*	pile ńe
80.	*knock*	gewgiw ńe
81.	*joke*	oku ńe

II Inner State:

82.	*be angry*	Elem eńts munt ńing ńim. *he bowels lung hot it-spoke* *He was very angry.*
83.	*be strong*	gi ńe

III Break:

84. *break* — tundup ŋe
85. *break* — bug' ŋe
86. *break/open* — Na mamats biling ŋint.
I passion-fruit a-break I-spoke
I broke open a passion-fruit.

IV Activity/Motion:

87. *pull down* — meŋe ŋe
88. *jump* — dus ŋe
89. *fall down* — ber ŋe

throw, send kelle (pp.149-50)

90. *wash* — noll kelle
91. *fishing* — wuk kelle

take tse (pp.153-5)

92. *ask* — ki tse
93. *dodge* — ok tse
94. *be married (of man)* — amp tse
95. *be married (of woman)* — ye tse

hear, feel pile (pp.150-1; 197)

96. *not aware, don't know* — ne pile
not
97. *be in pain, suffer* — ŋimbil pile
pain
98. *smell* — dakel pile
stink
99. *know/understand language* — yu we pile
word true
100. *believe* — kaim pile
true
101. *be thirsty* — noll pile
water
102. *be hungry* — mog'ŋe pile
food

show, indicate do (pp.151-3)

103. *be burned* — dop do
fire
104. *be heavy* — na dom
105. *be hot* — ŋing do
hot
106. *be full* — tsil do
107. *be dry* — aga do
108. *overflow* — omblak do

J Karam

do, make, function *g-

I Basic Meaning:

1.	*work, garden*	wog g- *garden, work*
2.	*give bridewealth*	smen g- *bridewealth*
3.	*pay compensation*	saj g- *compensation*
4.	*distribute food or valuables*	pasb g-

II Inner State:

5.	*be horizontal*	dlam g- *horizontal*
6.	*be strong, tight, firm*	kls g- *strong*
7.	*be bitter, sour*	km g- *bitter*
8.	*be diseased, especially of plants*	koty g- *malformation*
9.	*be rotten, stink*	kwy g- *odour, rot*
10.	*be uncontaminated, free*	monmon g- *free*
11.	*be free from restriction*	yem g-
12.	*feel shame, shy*	nabŋ g- *shame*
13.	*feel upset, sorry, jealous, etc.*	sb g- *intestines*
14.	*feel itchy, bitter, etc.*	slk g-
15.	*get sick*	tap g- *sickness*
16.	*be sweating*	wsb g- *sweat*
17.	*be sweet*	ydk g- *sweet*
18.	*feel warm*	pboŋ g-
19.	*feel cold*	ygen g- *cold, wind*
20.	*be straight*	ypd g- *straight, true*
21.	*feel lethargic, lazy, etc.*	ytwk g-
22.	*be hungry, thirsty*	ywan g- *hunger*
23.	*feel pain*	ywt g- *pain*

III Motion/Activity:

24.	*feint, sham attacking movement*	amñeb g-
25.	*joke, pretend, deceive (by action)*	esek g-
26.	*pump, push in and out of an opening*	jl g-
27.	*wince, shudder (on hearing harsh grating noise)*	kaj knm g-
28.	*smack the lips*	lk g-
29.	*shoot, of plants appearing above the ground*	lm g-
30.	*open something hinged, as a book*	mkal g-
31.	*duck, crouch*	ñk g-
32.	*leave footprints*	tob g-
33.	*cross the legs*	tob mogm g-
34.	*screw*	ibm oyt ib tik g- *fitting*
35.	*turn around and around by hand*	twg cckoy g-
36.	*open something hinged*	twg mkal g-

IV Miscellaneous:

37.	*whine, pull a sad face*	joŋb tmey g-
38.	*have a head cold*	jlken g-
39.	*spit*	kwñk g-
40.	*recline*	leb g-
41.	*show off, boast*	mlwk beŋbeŋ g-
42.	*stop sulking, abate (of anger)*	mlwk sayn g-
43.	*whisper, bribe*	mmwg g-
44.	*hiccough*	ñekñek g-
45.	*comb, make a comb*	ñwtam g-
46.	*die (ritual language)*	plam g-
47.	*ease, abate*	sayn g-
48.	*weep (ritual language)*	sm g- (Why not *utter*?)
49.	*lie*	tom g-, mng tom g- (Why not *utter*?)

become, turn into, come into being, set, put, place ay-

I Bodily Process (?):

50.	*have an infected sore/pimple*	bok ay-
51.	*have a birth-mark*	kñowŋ ay-
52.	*have dandruff*	jwn bobom ay-

53.	*have a scratch, blood blister*	lkañ ay-
54.	*have warts*	mablep ay-
55.	*have a scar*	magy wt ay-
56.	*have a scab*	slañ ay-
57.	*have tinea*	slk ay-
58.	*have boils*	sŋl ay-
59.	*have sores*	soy ay-
60.	*have wax in the ears*	tmwd sb ay-
61.	*regain good health*	swŋ ay-

II Miscellaneous:

62.	*draw breath, recover wind*	añŋ ay-
63.	*swallow*	kal ay-
64.	*avoid by dodging*	kan ay-
65.	*jump onto*	pteŋd ay-
66.	*be/become crazy, deaf*	saky ay-
67.	*to be mute, stupid*	toptop ay-

perceive *nŋ-

I Basic Meaning:

68.	*study, read*	bwk nŋ-
69.	*thing, be tame/civilized*	gos nŋ-
70.	*smell*	kwy nŋ-
71.	*know a language*	mnm nŋ-
72.	*be learned, educated*	skwl nŋ-
73.	*worry*	gos koŋay nŋ-
74.	*dislike, hate*	gos tep nŋ- *mind good perceive*
75.	*know magic*	kwj nŋ-
76.	*feel sympathy*	mapn nŋ- *liver*
77.	*glare at, feel angry*	mlwk nŋ- *nose, face*
78.	*listen to a whisper, think over a bribe*	mmwg nŋ- *bribe*
79.	*spy on, watch from hiding*	peg nŋ-
80.	*feel sorry for*	sb nŋ- *intestines*

utter *ag-

81.	*cadge, ask for gifts*	asb ag- *cadging*
82.	*explode*	bw ag- *explosion*

83.	*lie, be untruthful*	esek ag- *deceiving*
84.	*knock*	gygw ag- *sharp sound*
85.	*snore, rumble*	gwgwlm ag- *rumbling*
86.	*resound, as bell ringing, plane roaring*	gw ag- *resounding*
87.	*squeak, as a rat or a bird*	jwp ag- *squeak*
88.	*cough*	jlken ag- *cough*
89.	*mimic*	kl ag- *mimicking*
90.	*cry out, especially of women calling warning or alarm*	kwk ag- *call*
91.	*shout or yodel to someone at a distance*	kwb ag- *big*
92.	*sing*	kmap ag- or kmep ag- *song, singing*
93.	*make a noise which breaks silence*	ml ag- *sudden noise*
94.	*speak, talk, make the sound characteristic of animal or thing*	mnm ag- *speech, utterance*
95.	*talk a lot*	mnm koŋay ag- *speech many*
96.	*be longwinded, talk a lot*	mnm pwg ag- *speech many*
97.	*talk nonsense, talk freely*	monmon ag-
98.	*belch*	mwkbel ag- *belch*
99.	*tell the truth*	nŋd ag- *truth*
100.	*glitter*	ññakol ag- *glittering*
101.	*chorus*	ñwgl ñagl ag- *evening bush chorus*
102.	*sing and dance*	saŋ ag- *women's festival*
103.	*weep*	sy ag- *weeping*
104.	*laugh, shout*	swk ag- *laugh, shout*
105.	*shout or laugh in derision*	swk swk ag- *laugh, shout*
106.	*smile, chuckle*	swk tep ag- *laugh good*
107.	*thunder*	tmwk ag- *thunder*

108.	*cry out in amazement, pain, fear, to squeal of pigs*	wal ag- *call of amazement*
109.	*chant*	wol ag- *chant*

K Kuman

> The Kuman language does not have an abundance or variety of verbs with different shades of meaning. Instead of this the different shades of meaning are expressed with idiomatic verbal expressions in which verbs, nouns, adverbs or other parts of speech are used with the auxiliary verb. The active verb is as a rule given in the stem or participial form, and the auxiliary verb or adverb is used to bring out the specific shade of meaning (Nilles 1969:264).

The most important of these verbs are given below in the third person singular:

doŋgwa	*affect, indicate, burn*
duŋgwa	*state, say*
erukwa	*make, do, affect*
golkwa	*die*
iuŋgwa	*take, hold*
noŋgwa	*eat, take*
prukwa	*hear*
suŋgwa	*strike, hit*
toŋgwa	*give*
yoŋgwa	*put, lie*
aguŋgwa	*hold, touch*
kanuŋgwa	*see* (Nilles 1969:265)

Some examples of Kuman predications gleaned from the Trefrys' (1967) word list are presented below.

utter di-

1.	*repeat*	agle di-
2.	*feel*	bala di-
3.	*be broken*	bigle di-
4.	*sweep*	birum di-
5.	*lose*	ebe di-
6.	*be strong*	gigle di-
7.	*be half full*	giri begai di-
8.	*speak a language*	kaiyoko di- *language*
9.	*lie*	kibe di- *false*
10.	*jump*	puglo di-

do, make eri-

11.	*play*	daragl eri-
12.	*cry*	kai eri- (why not *utter*?)
13.	*be angry*	kuda eri-
14.	*be warm*	piragledi eri-
15.	*be strong*	yobuglo eri-

die gogl-

16.	*be hungry*	kidan gogl-
17.	*be afraid*	kodugl gogl-
18.	*be thirsty*	nigl gogl-

give te-

19.	*help*	ake sunade to-

L Sinasina

hit, strike si (McVinney and Luzbetak 1954:144-8)

I Basic Meaning:

1.	*cut*	di si
2.	*shine (of sun)*	are si
3.	*kill*	si gol
4.	*kick*	kie si
5.	*punish, beat*	kuba si *stick*
6.	*crucify*	kruse si *cross*
7.	*shoot*	kimil si *bow*
8.	*bite*	si
9.	*tatoo*	gil-mil si

II Inner State:

10.	*think, be intelligent*	nomame si *thoughts*
11.	*be stubborn*	kule si *stubbornness*
12.	*be breathless, pant*	milna si *breath*

13.	*be blind*	si bolmua *blocks*	
14.	*be careful/soft*	mone di si *easy being*	
15.	*be red*	malam gol si *blood red*	(cf. *bleed* malam si)
16.	*pain*	gi ul si	
17.	*be bad*	pril si *bad*	

III Tie, Hide:

18.	*tie up*	kan si *rope*	
19.	*cover up*	tu si	
20.	*hide/be secret*	kul si *hidden*	

IV Miscellaneous:

21.	*fill up*	si pele di *blocked it-is*	(cf. Banz (26))
22.	*warm up (of food)*	kwa min si *food good*	
23.	*have intercourse (vulgar)*	wo si *union*	
24.	*play Jew's harp*	tobale si *Jew's harp*	(cf. Banz (37))
25.	*spit*	ebil si *spit*	(cf. Banz (17))
26.	*bleed*	malam si *blood*	
27.	*wash*	buge si *splash*	
28.	*buy/purchase*	bile si *purchase*	
29.	*flatter*	ka kinan si *word ear*	(cf. Enga andíkí pingí
30.	*jump*	ole si *jump*	
31.	*fall*	age si *fallen*	also *overflow*
32.	*joke*	kule si *noise*	
33.	*wiggle noose*	kurere si *wiggle*	

utter, say di (pp.126-9)

I Basic Meaning:

34.	*speak the truth*	one dl *true*	

35. *lie* — kibd di *lie*

36. *speak through nose* — guna ka di *nose word*

37. *refuse, forbid* — mana di *refusal-my*

38. *snap, crack, break* — tu di *breaking*

39. *break* — pawa di

40. *snore* — gu gora di *snore shaking*

41. *indicate* — omine di *indication*

42. *bark* — gau di *bark* (cf. Enga gáu lengé)

43. *sing, go to parties* — gai kage di *man songs*

II Inner State:

44. *be blind* — gi di *closed*

45. *be hot, have a fever* — niga di *hot*

46. *be straight, fit* — kuno di *fits*

47. *be soft* — ura di *soft* (cf. Enga támbo lengé)

48. *be angry* — ka ure di *work angry*

49. *be beautiful* — min di *good*

50. *be full* — gi di *blocked*

51. *be at rest* — yu di *just*

52. *be* — di *there-is*

53. *be careful* — mono di *easy*

III Miscellaneous:

54. *break* — bil di *break*

do/make el (pp.130-2)

I Basic Meaning:

55. *do correctly, successfully* — min one el *good true*

56. *succeed, win* — yobilage el *strong*

57. *do incorrectly* — ki el
bad

58. *work* — kogenan el
work

59. *labour in vain* — yumore el
in-vain

60. *work continuously* — morone morone el
manner.true manner.true

61. *paint* — mine gol el
designs red

62. *do good/honour* — akun dal tere el
holding-good calling having-given

II Inner State:

63. *be fit, equal, same* — kune el
fit

64. *be happy* — argan el
happy

65. *be sick* — nibil el
sickness

66. *be industrious* — nima pire el
straight having-gone

67. *thank* — min el
good

III Miscellaneous:

68. *hold pig festival* — bona igin el (cf. Enga pingí *do*)
pig ritual

69. *stir, mix, churn* — auna mauna el
push pull

70. *play (cards)* — kat el
cards

71. *have intercourse (sexual)* — unan unan el
around around

72. *have intercourse* — tal ki el
thing bad

effect, consume de (pp.124-5)

I Inner State:

73. *be heavy* — ibin de
weight

74. *be decayed/rotten* — dugil de
decay

II Motion:

75. *send a message* — ka di deiwa
word saying

76. *spill, empty* — tule de
empty

77. *fell, pull down* — gure maunil de
shaking down

III Miscellaneous:

78.	*burn*	gana de *skin-my*
79.	*shine (of moon)*	ba de *moon*
80.	*shine (of sun)*	are de *sun burns*

know, hear pil (pp.141-3)

81.	*suffer*	gi ul pil *bound pain*
82.	*smell*	kumine pil *scent*
83.	*understand*	ka pil *word*
84.	*believe*	one pil *true*
85.	*fear*	kuril pil *fear*
86.	*feel bad/sad*	pril si pil *bad striking*
87.	*pity, mercy*	mile pil *sorrow*

M Gahuku

Deibler does not give an interlinear translation, so the following material is grouped according to the base verb (literal meanings unknown):

nepelekave

1.	*He hit me.*	Nepelekave.
2.	*I am tired.*	Goseleq nepelekave.
3.	*I have a cold.*	Avona nepelekave.
4.	*I am sweating.*	Govisi nepelekave.
5.	*He is cross at me.*	Mukahaq nepelekave.
6.	*I am injured.*	Gotaq nepelekave.
7.	*He is looking at me.*	Gonuq nepelekave.
8.	*Bananas have formed.*	Gizasi apelekave.
9.	*I am chilly.*	Hepeq nepelekave.

velekava

10.	*He made a pot.*	Somo velekava.
11.	*He made a road.*	Gapo velekava.
12.	*She wore a skirt.*	Gaina velekava.

13. *He vomited.* Musi velekava.
14. *Water boils.* Nagamiq velekava.
15. *He scraped the kaukau.* Goive velekava.

zekave

16. *He went separately.* Otopaq zekave.
17. *He kicked the ball.* Vali zekave.
18. *It is raining.* Golini zekave.
19. *It is cold.* Geha zekave.
20. *It is dark.* Liqmugisi zekave.
21. *It has fruit.* Gihila zekave.
22. *He did it once.* Epenape zekave.
23. *He buried it.* Gale zekave.

hizekave

24. *They kneeled.* Alapusa hizekave.
25. *He brought.* Meina hizekave.
26. *He has measles.* Goive hizekave.
27. *He put in posts.* Za hizekave.
28. *He wore it.* Tulitali hizekave.
29. *He made a boundary.* Giniq hizekave.
30. *He made a fence.* Geisa hizekave.
31. *He had pity.* Agika hizekave.
32. *He bore tales.* Lotoka hizekave.
33. *He is crazy.* Negi hizekave.
34. *A chicken pecked it.* Okoloho hizekave.
35. *He juggled.* Peletani hizekave.
36. *There was a rainbow.* Hugepa hizekave.

vizekava

37. *He is resting.* Avasuq vizekava.
38. *The kaukau is big.* Goire vizekava.
39. *He cursed.* Usiq vizekava.
40. *It is dried.* Gosagava vizekava.
41. *He fooled me.* Nogoka vizekava.
42. *He urged him.* Gala vizekava.
43. *He is happy.* Agoliza vizekava.
44. *He bent over.* Higiq vizekava.
45. *He reproved.* Pigi vizekava.
46. *He embraced.* Aputaq vizekava.
47. *He was afraid.* Ahelele vizekava.
48. *He taught them.* Kogoq vizekava.

49.	*It is swollen.*	Lulu vizekava.
50.	*He filled it.*	Goni vizekava. (1971:3f.)

F BenaBena

Young (1964) states that

> the periphrastic [verb] complex constitutes more than 50 per cent of all verb constructions in text. It is defined as a verb complex consisting of a free-form word of specific verbal implication in close knit sequence with a fully inflected nuclear verb, which together have a unique semantic content (78).

The form of the periphrastic verb complex consists of the

> free-form word, which is lateral to the nuclear verbs, is termed the peripheral since it behaves as an auxiliary to the verb within the complex. It is non-inflectional. The nuclear verb, with obligatory affixes of tense, person and number, and mood (as well as optional suffixes), occurs as the nucleus of the complex.
>
> In this complex, the nuclear verb, losing its basic meaning in almost every instance, becomes the nucleus for a great range of peripherals, the peripheral bearing the main semantic load for the complex and the verb a mainly functional one (78f.).

In stating the criteria for identifying the components as two separate words, Young mentions that whereas "prefixal morphemes are not limited to any one verb class, each peripheral is limited to one specific nuclear verb, and therefore class" (79). Restated, what Young is saying is that what he calls the 'nuclear verb' of the periphrastic verb complex acts as a classificatory verb. "A peripheral occurs only with one specific verb,..." (79).

[Note: Young essentially says that he has no intersection of the kind shown above in the Enga data 4.2.3, and demonstrated for Karam by Pawley (p.109 above) when showing that the 'nuclear verb' does in fact carry some semantic load.]

Young presents his predications with typical examples:

> attention has been drawn to a specific nuclear verb, with its class, in each set of examples. Each verb selected is a typical example of those nuclear verbs which have high frequency count in periphrastic constructions (80).

hit ho-

1.	*I asked [him].*	Loka ho?ohube.
2.	*I broke/bent [it].*	Igofa ho?ohube.
3.	*I fell down.*	Kota ho?ohube.

do i-

4.	*I called.*	Kehe i?ohube.
5.	*I dried.*	Lisepa i?ohube.
6.	*I speared.*	Iya i?ohube.

take li-

7.	*I will work.*	Foya lilube.
8.	*We* [pl] *wiped* [*it*].	Kele li?ohune.
9.	*He is actually stealing now.*	Agumina nollbe.

be hu-

10.	*I cut.*	Laga hu?ohube.
11.	*I washed.*	Okala hu?ohube.
12.	*I cooked.*	Laita hu?ohube.

pierce fi-

13.	*I bought.*	Mina fi?ohube.
14.	*I will break* [*it*] *up.*	Litulu filube.
15.	*He is tearing* [*it*] *out now.*	Te nofibe.

O Usarufa

Verb phrases of the idiom type have "restricted co-occurrence potential of constituent words and a limited degree of productivity" (Bee 1973:287). "...only a few verbs are potential fillers of the verb slot. The following examples give the more common ones which account for about two-thirds of the verbal idioms" (1973:291).

do, make o

1.	*be angry, pout*	komá *pout*	
2.	*shot, bark, etc.*	wáága *noise*	
3.	*initiate a boy*	maabumá *young man*	
4.	*be bashful*	agayemá *shame*	
5.	*sniff, smell*	ákubitaa *fragrance*	
6.	*laugh, be happy*	wírá á *laugh, smile*	
7.	*search*	abáá *lost*	(cf. Enga álo pingí)
8.	*admire*	aayoq *gaze*	

9.	*shiver*	aqteqte
10.	*wash, scrub, cut wood finely*	tete
11.	*shake something*	apibi
12.	*kiss*	amóqna moqna *kiss*
13.	*burp*	kamu gamáá *a burp*
14.	*be messy*	turi táári *messy*
15.	*be crazy*	nagí naagl *crazy*

Of especial interest to our comparison of Enga kaengé *be (of inner states)*, is the data Bee presents for the verb *do*.

> The verb to do, ..., is an auxiliary verb which occurs only in verbal phrases and equational clauses. In many of its functions it is like the English verb *to be*. As a verbal auxiliary it may be used to form tense, voice or mood contrasts instead of the usual suffixation. In this case the appropriate suffixes occur on the verb to do and the main verb precedes it without suffixation. In equational clauses and descriptive or state of being phrases it functions as a copula (1973: 294).

Of the five categories of phrases with this verb, the 'state of being' phrases are of most interest to the previous discussion; some examples of these are

do

16.	*be emaciated*	pé *skinny*
17.	*be displeased*	kó *pout*
18.	*be obedient*	kato *obedient*
19.	*be easy, light*	oyáá *light*
20.	*be warm, dry*	kokó *warm*
21.	*be bad*	táiq *bad*
22.	*be big*	anó *big*
23.	*be found*	pááq *found*

say

24.	*hiccoughs*	níkiq nikiq *hiccough*
25.	*ăn itching foot indicating someone is thinking of you*	áagaa ágaa *gossip*

26.	*hurry someone*	waku waku	
27.	*be crackly dry*	této	(cf. Enga kéké lengé)
28.	*be firmly planted*	kíki	
29.	*fit tightly together*	títi	
30.	*suck*	míqmiq	
31.	*stutter*	abububu	
32.	*mimic*	ameme	
33.	*cough*	umoimá *cough*	
34.	*hum*	áúqa *inside*	
35.	*urinate*	awimá *urine*	

burn

36.	*fade*	ópo *dullness*	
37.	*shine*	áwáarara *brilliance*	

dance

38.	*play*	áábê *play*	
39.	*be beside oneself with anger*	imaamú *rage*	

go

40.	*fly*	arabé *flight*	

move

41.	*move a stubborn child*	anumá *mountain*	
42.	*sand*	kámanama *a rough leaf*	

get, take

43.	*buy*	meyámmá *purchase*	
44.	*steal*	moyámmá *theft*	

come

45.	*bemoan*	karagíqá *sorrow*	
46.	*visit*	nammáqá *visit*	

pour over

47. *bathe* — nommá *water*

48. *paint* — ayammá *colour*

Miscellaneous:

49. *attend school* — naamma *house*

50. *cry* — ibiqá yara *a cry to weep*

51. *smell* — akuqá íta *an odour to hear*

P Tairora

"Some nominals occur in other constructions clearly as nouns while other nominals occur only in compound stem constructions. The following verb has generally no meaning in isolation. For example the nominal, iha *firewood* occurs elsewhere as a noun but the verb, quare occurs only with iha" (Vincent 1973:562).

1. *He firewooded the tree branch* i.e. *He burned the tree branch.*
   Katari kaara iha quare-ro.
   tree branch firewood burn-it

2. *It hit his hunger place = He is hungry.*
   H-antuqa h-ari-ro.
   his-hunger.place him-hit.it

This is probably another case (cf. Ross and Luzbetak) in which the verb is constant in meaning (or neutral), and the adjunct is the variable.

3. *He said talk, he spoke.*
   Uva ti-ro.
   talk say-he

4. *He gave him talk, he told him.*
   Uva ti-va a-mị-ro.
   talk say-nom. *him-give-he* (1973:562)

Examples (3) and (4) are of a nominalized verb stem plus a second verb stem.

Q Waffa

The "periphrastic verb phrases" are discussed by Stringer and Hotz (1969:29), who give the following as verbs used in the nucleus slot:

kiaa, iikia	*do*	kia	*say*
varia, rakia	*be, sit*	pikiaa	*leave*
taa, rikiaa	*see, hear (understand)*	raa	*move*

taa	*desire*	ngia	*come*
kua	*go*	tummua	*come down*
daa	? (meaning unknown, does not occur as a simple verb)		

R Kâte

Das Kâte hat eine verhältnismässig geringe Zahl von primären Verben, wie z. B. la *gehen,* lo *nehmen,* mu *sagen,* hone *sehen,* mana *hören usw.* Die meisten Verba dagegen sind mit ke zusammengesetzt...intransitive Verba, die auf ke auslauten [sind], z. B. mateŋ-ke *kühl sein,* ʒaŋ-ke *morsch sein,* duŋ-ke *sich niederbeugen.*

Mit Hilfe von ke werden auch aus anderen Wortarten Verba gebildet, z. B. wokec-ke *jemand auf dem Boot fahren,* von woke *das Kanu;* fuŋ-ke *etwas anfangen,* von fuŋne *das dicke Ende eines langen Gegenstandes;* upec-ke *etwas um den Hals tragen,* von upec *der Hals;* biaŋ-ke *gut sein,* von biaŋne *gut;* selec-ke *etwas gemeinsam tun,* von selec *miteinander.* Der k-Laut in ke ist schwer zu erklären, und es erhebt sich die Frage, ob ke gleich dem Verbum e *sein, tun)* ist, so dass k nur Lautkonservierung unter bestimmten Bedingungen wäre. Für letztere Auffassung spricht der Umstand, dass dem k-Laut stets der harte Stimmabsatz c oder ein ŋ vorausgeht (vgl. § 118, c und 119a). Doch steht dem die andere Tatsache gegenüber, dass es Verba gibt, die auf e und ke zugleich auslauten, z. B. eatu-e intr. *täuschen,* eatuc-ke tr. *jemand täuschen;* âsu-e intr. *riechen,* âsuc-ke tr. *etwas beriechen, beschnuppern.*

Andere Endbestandteile von Verben sind: e, ne, le, we, z. B. filu-e *loslösen,* lisi-e *umkehren,* kisoŋ-ne *zwischen den Zähnen tragen,* lâlâŋ-ne *verschwinden,* gâpâ-le *schwarz sein,* hesi-le *krumm sein,* joŋ-ta-we *schäbig aussehen,* loka-we *schwach sein.* E wird auch viel als selbständiges Verbum *tun, machen* gebraucht. Bei den Konsonanten der letzten drei handelt es sich wohl nur um Lautassimilation. Etliche Verba lauten sowohl auf ne als auch auf ke aus, ohne dass ein Bedeutungswandel damit verbunden wäre, z. B. ʒaŋ-ne und ʒaŋ-ke *zerfallen,* bândeŋ-ne und bândeŋ-ke *festbinden.*

Zur Bildung verbaler Ausdrücke kommen auch vielfach Zusammenstellungen von Substantiven und Verben vor, z. B. guŋ mana *träumen,* dâŋ mu *reden,* fifia ba *schwimmen,* kiŋaŋ ga *dienen,* mâlo he *keuchen,* guŋ he *donnern,* sasec e *lüstern sein* usw. (Pilhofer 1933: 24-5).

S Selepet

Examples are given for the auxiliary verb phrases using *do* and *say* in Selepet, as well as comments on the assignment of Tok Pisin loan items.

do oap

1.	*it oozed*	kin kin kân kân oap
2.	*he hiccoughed*	ŋâtâk oap
3.	*he detected sorcery*	hatak oap
4.	*he disappeared*	gulip oap

say yap

5.	*it crackled*	kitik patak yap
6.	*it dried up*	saŋ yap
7.	*it rattled*	kirik kârâk yap
8.	*it collapsed*	putuk yap

...the verb tuhu *to do, build, make,* frequently occurs as the auxiliary when a Neo-Melanesian transitive verb ending in im occurs as the adjunct. Note that many Selepet homopersonal verbs end in m so that this type of AVP is probably analogous to the Selepet sentence which consists of a dependent homopersonal verb immediately followed by an independent verb (McElhannon 1972:73).

9.	*he drives it*	draivim tuhuap
10.	*he straightens it*	stretim tuhuap
11.	*he paints it*	penim tuhuap
12.	*he shoves it*	subim tuhuap

T Nabak

do mi

1.	*He is not angry.*	Ngenzingzing ku tabm. *anger* neg prog-*do-he*
2.	*You are yawning.*	Ang tabmnik. *yawn* prog-*do-you*-pres
3.	*He burped.*	Kât mip. *burp did-he*
4.	*I am writing.*	Melowang miap. *writing do-I*-pres

hit ku

5.	*He is coughing.*	Katonang kun. *cough do-he*-pres
6.	*They are dancing/singing.*	Silik ku-ip. *dance/song hit-they*-pres

Others:

7.	*He is urinating* (literally: *He is urinating urine*).	Sandi tasandin. *urine* prog-*urinate-he*-pres
8.	*He is sleeping* (literally: *He is sleeping a sleep* ?).	Meluk tawan. *sleep* prog-*sleep-he*-pres
9.	*Don't cry (a cry).*	Si Susuping. *cry cry*-redup-neg

Note examples (7-9), the cognate object verbs. (Fabian and Fabian (1971:80f.))

U Kapau

The Noun-Verb expression

> is a very common one in Kapau. It consists of a noun plus a verb centre...[it] is not a close-knit expression structurally as the noun can be separated from the verb by object, adverb and other things... But it is close-knit semantically (Oates and Oates 1968: 38f.).

An example given of this type of Vphrase is

1.	*I am working.*	Ni wamnga giya. *I garden am-doing-I*

In the discussion of the verb stems which occur in such Vphrases, the Oates state that the

> *do* stem is by far the most common... Many of these forms expressed Kapau idiom (and it is wise to learn the phrase as entity) [*sic*]. For example, many physical needs and attributes and the forces of nature are expressed in a N-i-Vx: *hunger, hearing, water in flood, wind* all *do* (39).

do i-

2.	*be lightning*	inavä *lightning*
3.	*be windy*	ymnga *wind*
4.	*ooze pus*	guymnga *pus*
5.	*be drying*	yea *dry*
6.	*ripen*	mqa *ripe*

speak, utter t-, ti-

> occurs with nouns which deal with uttering or making a noise and with nouns dealing with natural phenomena, or the emotions (40).

7.	*speak, talk*	pane'a *talk*
8.	*whistle*	wipa *whistle*
9.	*sing*	äpa *song*
10.	*thunder*	hinko *thunder*

think or *utter from within* mt-, mti-

> occurs with nouns dealing with that which proceeds from inside a person (40).

11.	*think*	quno *thought*

12. *vomit* quotä

feel in-

13. *remember* quno
thoughts

hit, strike qi-, 'i-

14. *hit* ipka
stick for hitting

15. *write* tuwämnga
mark, charcoal

16. *rain* piya
rain

throw away mau, mo-

17. *breathe* mtnga
breath, steam

18. *throw a stone* hawa
stone

go u-

19. *walk* gänga
door, walk

20. *be sorrowful* ha'va
sorrow, heart

make

21. *build house* änga
house

22. *beat eggs* mnga
eggs

eat, devour n-

23. *eat* ita
food

24. *burn* ta
fire

go down o-, we

25. *sleep* sä'ä
sleep

V Weri

Boxwell in his discussion of the Weri verb phrase gives as one type of auxiliary verb phrase type a, composed of two inseparable parts, a noun stem, descriptive or adjunct followed by an auxiliary verb. Some examples of this type of verb phrase are:

1.	*he speaks*	nyun ya *word say*
2.	*he speaks profoundly*	nyun kunum ya *word heavy say*
3.	*he blows*	pül yamingk *breath hits*
4.	*he has a cold*	ëng-re ngësul ya *cry-and cold does*
5.	*he is in a temper*	ëng-re kulap yai *cry-and angry does*
6.	*he crawls*	mor yang yes *hand ground goes*

Some examples of the auxiliary verb phrase type b are:

7.	*he works*	waür yai *work does*
8.	*he works very hard*	waür kisang pan yai *work big very does*
9.	*he drinks*	ë yen *water eats*
10.	*it is smoky*	es koülup yai *fire smoke does*

Some examples of type c are:

11.	*it is ripe*	kup yamu *red hits*
12.	*it is bad*	ütpet yewas *bad puts*
13.	*he is itchy (from lumps)*	ülup ülup yai *lump lump does*
14.	*she is awake*	ët ët wii *eye eye is*
15.	*it is tight*	tain-tai yewas *tight-tight does*
16.	*he helps*	kaamuk-muk yai *help-help does*

Sensory verb phrases:

The auxiliary verb used here is either yai *do* or yes *go*

17.	*he is hungry*	kiin-iin yai *green vegetable*-ben *does*
18.	*he is tired*	korup-un yai *skin*-ind.obj *does*
19.	*he is deaf*	kat-iip-un yai *ear*-ind.obj *does*
20.	*he is thirsty*	ë-ët-en yai *water*-sg-ind.obj *does*

(Boxwell and Boxwell (1969:6ff.))

W Kunimaipa

"The auxiliary carries most of the meaning of the phrase and the Head carries all the suffixation...the verb which most commonly manifests the Head is ta *do*" (Geary and Pence 1973:61). The verbs listed as head are ta *do*, heza *be*, rava *become*, vata *make*, oraeza *lies*, na *eat*, mena *kill*, teza *take off*, and ema *come*. Some examples of this construction in Kunimaipa are

1.	*he shook it*	dei dei ta-ha *shake shake do*-3s/per
2.	*it boiled*	rokoroko ema-ha *boil come*-3s/per
3.	*it dawned*	ale teza-ha *light open*-3s/per
4.	*I will bake it*	aro teza-ha *bake do*-1s/imp
5.	*it pained*	kakama ta-ha *pain do*-3s/per
6.	*he only danced here*	dapa-hara ere mena-ha *dance-just here hit*-3s/per
7.	*it dried*	ngai rava-ha *dry become*-3s/per
8.	*it is empty*	ngai oraeza *dry lies*
9.	*they dried it*	ngai vata-ha *dry make*-3pl/per

(Geary and Pence (1973:62f.))

X Suena

Wilson says

> perhaps the contribution which Suena can make to an understanding of all the Binandere languages is in the area of 'Compound Verbs'. In Binandere itself it would appear that all verbs are formed with the Auxiliary verb ari *to do*. In Zia, Mailander set up five classes of verbs, four of them based on the fact that they took different Auxiliary verbs. This can be done for Suena, too, though this would be establishing the classes on the basis of form rather than function. The Auxiliary verbs, with their primary meaning, are:
>
> | SUENA | ZIA | BINANDERE | OROKAIVA | ENGLISH |
> |---|---|---|---|---|
> | wai | yari | ari | e/ari | *to do* |
> | sai | sari | | | *say* |
> | mai | mari | | | *come* |
> | gai | gari | | | *see* |
> | awai | | | | *rest* |
> | nai | | | | *arrive* |
>
> Suena compound verbs formed from the Auxiliary verbs listed above [are]

1.	*sleep*	gitawa wai
2.	*sneeze*	asio sai
3.	*help*	sore mai
4.	*burp*	oni awai
5.	*yell*	are nai (Wilson 1969:104)

Y Korafe

Personal discussion with James and Cynthia Farr indicate the presence of predications in Korafe; a few examples from their unpublished word list/notes are given for ari *do* and sari *say*.

do ari

1.	*cry*	sorara ari
2.	*fear*	oju ari
3.	*fight*	tataya ari
4.	*quarrel like children*	jujuna
5.	*hate*	imboe ari
6.	*play, sing*	yaru ari
7.	*sell*	maket ari
8.	*watch, wait, protect*	kaifo ari
9.	*want, like*	uju ari
10.	*work*	saramana ari
11.	*move*	javi ari
12.	*walk with knees flexed/limp*	kenju kenju ari
13.	*hop*	kerite kerite ari
14.	*hiccough*	uko ari
15.	*search for*	kakone ari
16.	*learn, know*	kasama ari
17.	*be open*	keowa ari
18.	*marry a man*	wai ari
19.	*share food*	soro ari
20.	*weed*	vive ari
21.	*notch*	kambae ari
22.	*itch* (3rd person)	gingito ari
23.	*be finished* (3rd person)	dadaba ari
24.	*feel pain, anguish*	itatama ari
25.	*stink*	masa ari
26.	*smell good, kiss*	muno ari
27.	*swim*	muno ari
28.	*look for, find*	ujava

29. *carry piggyback* asa ari
30. *rip, tear* torere ari
31. *worry (literally throat pains do)* dubo mema ari
32. *tickle* kurikuri ari
33. *err* sembae ari
34. *turn off lamp, extinguish fire* soana ari
35. *bandage a sore* fiŋa ari
36. *pass gas* jegimo arl
37. *crawl* ukuge jirirl ari
38. *recline* tuturo ari
39. *help* sohemba ari
40. *climb hand over hand* ririke ari
41. *believe* tumonde ari
42. *spit* kosiua ari
43. *lasso an animal* ivasa ari
44. *coil (of string)* kefu ari
45. *peel (of vegetables)* sarura ari
46. *shiver* (3rd person) (tamo) susumbara ara
47. *be happy* iwuga ari
48. *commiserate* gumema ari
49. *snap, break off* degage ari
50. *stretch (of rope)* kamusa ari
51. *pinch* gabasa ari
52. *steer (of a boat)* kuniŋa ari
53. *mix up* jinemba ari
54. *measure* inoro arl
55. *live, be in health* jebuga ari
56. *dance* ivisa ari

say sari

57. *cough* ekono sari
58. *laugh* geŋa sari
59. *sneeze* asiyo sari
60. *request* benunu sari
61. *answer* mino sari
62. *shout, yell* kori sari
63. *whisper* saŋiako sari
64. *lie* gunguba sari
65. *gossip* yove sari
66. *gossip* osa sari

Note that Korafe is a member of the Binandere family: cf. the materials given on Suena.

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IJAL	International Journal of American Linguistics
NGLM-MS	New Guinea Lutheran Mission-Missouri Synod
PLA	Pacific Linguistics, Series A (Occasional Papers)
PLB	Pacific Linguistics, Series B (Monographs)
PLC	Pacific Linguistics, Series C (Books)
PLD	Pacific Linguistics, Series D (Special Publications)
SIL	Summer Institute of Linguistics

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